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Massachusetts Anti-Tuberculosis League

FIRST ANNUAL CONFERENCE, APRIL 1, 1915.

I.

THE ORIGIN AND AIMS OF THE MASSACHUSETTS ANTI-TUBERCULOSIS LEAGUE.*

By VINCENT Y. BOWDITCH, M.D., BOSTON,
President.

At the first anniversary meeting of the Anti-Tuberculosis League of Massachusetts, it may be well to reiterate the statement made a year ago, at the last meeting of the "Massachusetts Tuberculosis Conference." The League was an outgrowth of that Conference, which in itself was originated by our Boston Association and was formed for the purpose of spreading the knowledge of the work done by it throughout our State. The purpose of the League is to bring all of the various associations and affiliations into closer touch with each other, in order that by coöperation and coördination more efficient work can be accomplished than ever before.

Massachusetts has always been in the foremost ranks of anti-tuberculosis work, and the formation of this League is, in my opinion, a marked step forward in procuring greater efficiency of effort.

It would be impossible in a short space of

* Read at the first annual meeting of the League in Boston, April 1, 1915.

time even to touch upon all the many phases of the anti-tuberculosis work, but certain important points that have impressed themselves upon my mind I wish to emphasize now. I have spoken of the necessity of coöperation among all the increasing number of anti-tuberculosis associations in the state, in whatever special form of work each one is interested. Such meetings as we have here today must have their good effect in enabling us all to learn how each community is grappling with its own special problems. I am convinced that it is important to recognize the fact that, owing to varying conditions, each locality may have its own special way of dealing with the tuberculosis problems, and what may be a good method in one, may not be so suitable for another. The main fact should be that wherever work is being done the situation should be met with vigor and determination to control the ravages of the disease. The mere establishment of an anti-tuberculosis association which lacks the elements of patient, dogged perseverance in following up the work, will amount to little or nothing. Mere "flash-in-the-pan" enthusiasm is of no avail, and proof of determined effort in one direction or another to stamp out or at least control the disease wherever it arises should be insisted upon, as a *sine qua non* of membership in the League. For this reason, if our name means anything, we should have some standard of work which entitles an association to membership. This subject, I am glad to say, will be thoroughly brought out in our addresses today, and is of vital importance to the worth and efficiency of our organization.

Thus far, in many communities and not with-

standing the efforts of anti-tuberculosis associations, there has been a lack of proper response to the legislation which has been enacted during the past four years with reference to the establishment of hospitals for advanced cases in cities of 10,000 inhabitants or over, and for dispensaries in cities and towns of 10,000 inhabitants or over. At the time of writing, out of 35 cities in Massachusetts, but 16 have established hospitals, three or four of these having been founded by private means. The others are of municipal origin.

Of the 54 cities and towns of 10,000 or more inhabitants, 21 say they have dispensaries, the term being apparently somewhat elastic; for, up to the present, a decided difference exists in the scope and efficiency of those thus far established. The amendment of 1914 to the original bill for dispensaries now creates a standard which if followed will be a great step forward.

Fortunately, our newly-appointed Commissioner of Health has put himself on record as intending to see that the laws upon these matters are strictly enforced, and we hope to see during the next year those cities and towns, which have been laggards thus far, coming to the fore and adopting measures which are essential to the welfare of all. It should be the function of the members of our League throughout the state, so to influence public opinion by every means in their power that our Commissioner may be enthusiastically supported in his laudable endeavor to see that the laws are obeyed.

Wherever tuberculosis exists, we shall have to come face to face in a greater or less degree with one problem which is of great importance and to which my attention has been very strongly drawn recently, viz.: What shall be done with the incorrigible consumptive who, in spite of instruction, admonition, or threats, persists in disobeying hygienic laws and wilfully fails to do his part in lessening the danger of contagion?

At the meeting of the Eastern Branch of the National Association for the Study and Prevention of Tuberculosis, in Bangor, Maine, last October, a member of the Board of Health of Haverhill,—who, unfortunately, has recently died,—gave a most impressive account of his attempt to remove incorrigible consumptives from their homes. On account of the restricted powers of the Board of Health, he was continually hampered in his endeavors to control several cases by lawyers who aided the offenders, and, because of this, his hands were completely tied in the performance of what he knew was of paramount importance to the health of the citizens. The account of his various troubles and tribulations was interesting and even amusing, and tempted one to see only the ludicrous side of life, had not the underlying seriousness of the man convinced one that he had been dealing with one of the most difficult and serious prob-

lems which must be grappled with and solved if we desire success in our efforts to control this disease.

Drastic measures are always to be undertaken with extreme caution, and only when less strong means are unsuccessful.

In the case of tuberculosis, moreover, the fact of the long duration of the disease adds greatly to the difficulty of dealing with it in all its phases. With the acute infectious diseases, it is comparatively easy to seize upon a dangerous case and confine it closely for a comparatively short space of time. Not so with the consumptive, dragging out long months and years in the course of the disease: a fact which changes the moral aspect, as it were, of the question of dealing with such cases. For the welfare of our state, however, we are justified in demanding enlarged powers for our boards of health, by which sterner measures not inconsistent with kindness and regard for the feelings of others may be used for the enforced isolation of the incorrigible consumptive who persists, by careless and dirty habits, in making himself a source of danger to others. Lest there should be fear in the minds of some as to the justice of such summary procedures, it should be stated that amendments to existing laws have already been proposed by which the rights of patients will be amply protected before measures necessary for the public welfare shall be adopted.

Since 1912, four states have adopted laws for compulsory segregation for incorrigible cases: New Jersey, New York, Wisconsin and Minnesota, but there is a marked dissimilarity in the methods of legislation upon this important subject, and thus far one is left in doubt as to the comparative merit of the different laws passed in the various states.

The question has not infrequently been raised of late about the necessity of keeping up anti-tuberculosis associations in communities which have taken definite steps towards establishing local hospitals, dispensaries and other methods of overcoming the disease. It is my firm belief that the time has not yet come, and is not likely to come for many years, when such associations are unnecessary. In my opinion, they should be independent, as a rule, of all institutions which deal with the disease, but it should be their function to see that proper measures are adopted and enforced, and to act as constant aids in settling problems as they arise, both in securing legislative aid and in keeping facts constantly before the public. There is always danger, after certain important steps have been taken, that the public will believe that everything necessary has been done and that no further effort is needed. Inaction and the danger of falling into ruts may easily result from such an attitude of mind, and it is the function of anti-tuberculosis associations to counteract this tendency.

One other vital question for the public viz.: the more widespread establishment of open-

air schools and of so-called "preventoria," or special sanatoria, for the reception of children who are showing symptoms of debility, which may be the forerunner of subsequent disease, and even for those who have already shown undoubted evidence of tuberculosis.

We can safely say that it is gradually becoming the established belief that tuberculosis, often in latent form, in childhood is the forerunner, much more frequently than was formerly supposed, of active disease in adult life. The importance of proper attention to this phase of the question, therefore, cannot be overestimated.

The beneficial effect of open-air schools upon the health of children thus far shown should certainly encourage us to push this matter much more energetically than has been done up to the present. As a concrete example of this, I should like to mention a letter recently received from a teacher in one of our large cities, she having been a graduate from the Sharon Sanatorium, seventeen years ago, after a long, successful struggle against tuberculosis. A short time ago, she wrote, not only of her own good health and almost interrupted seventeen years of teaching, but she added the significant words, "I not only know the inestimable benefit of fresh air upon myself, but I am constantly teaching it to my pupils. During the past winter I have had the windows of the school rooms almost constantly open. During epidemics of 'colds' among most of the schools in Lowell, this winter, not one of my children has been out of school or incapacitated by a 'cold'"; a statement which not only stands for the value of fresh-air treatment, but shows us the value of sanatoria as schools in themselves for teaching people the simple but important laws of hygiene: the strongest factor we know in the practice of what we call "preventive medicine."

A school has been established for the tuberculous children who are patients at the state sanatorium at Westfield, Mass.—the only one of our state sanatoria to adopt the plan. During the past year the Boston Consumptives' Hospital has opened a school at Mattapan, and the state school at Canton for crippled children should be included in this list although not strictly confined to cases of tuberculosis. At the Sharon Sanatorium,—a private institution,—hitherto intended for women or girls only, a new department is to be established through the generosity of a relative of a former benefactress, and plans are now developing for a building to be devoted to the treatment of boys and girls under the age of fourteen who are showing symptoms of tuberculosis, especially of the pulmonary variety. It is planned to combine a certain amount of school work with the treatment, which, when done, will mark a new departure in the methods of private sanatoria in this part of the country.

The foregoing subjects are a few of the many important ones which come up in any consideration of anti-tuberculosis work. Proper housing of the poor, and factory supervision are matters

which can be touched upon here merely to urge their vast importance and the necessity of concerted action to ensure proper enforcement of existing laws.

In closing I can only reiterate my firm belief that by coming together in this way, we shall by patient, persistent and energetic work accomplish much towards limiting the ravages of this disease, with the prospect of gradually relegating it to the class of preventable ills of the human race.

II.

WHAT THE ANTI-TUBERCULOSIS ORGANIZATIONS CAN DO TO HELP THE STATE DEPARTMENT OF HEALTH.

By ALLAN J. McLAUGHLIN, M.D., BOSTON,

Commissioner of Health, Massachusetts State Department of Health.

I WONDER if the individual members of the Massachusetts Anti-Tuberculosis League realize the full possibilities of their organization in the prevention of tuberculosis. The underlying motives that bring most of us into organizations of this kind are usually those of charity, humanitarian feeling and sympathy with suffering, rather with the idea that suffering is centered in the individual. This is perhaps our motive at first. But we can take no part in a movement of this kind for any length of time without realizing that the individual after all is only a small part of a great problem, and that the point of view must be that of the community rather than the individual. The care of the individual of course sometimes lies along parallel lines with the prevention of the disease, but after all the keynote of prevention is control of the individual.

Now the health officer in many cases has been accused of being cold-blooded and mathematical. I have been in countries during epidemic times where we have been accused, and I think we should have had to plead guilty, of neglecting the individual patient because we did not consider that our function; and although it was unfortunate that there were not officers enough to give that individual care to the patient, as responsible health officers we felt it was justifiable to neglect the individual for the good of the community. Fortunately, in tuberculosis, the two lines of care of the individual and prevention of the disease run parallel, so that we have no need here to neglect the patient in order to carry out our line of preventive work.

The health officer's duty today is not only to prevent disease but to keep people well. That is, he works along the line of preventive medicine, and the fact that he has been called mathematical and cold-blooded is accentuated by the fact that he bases his work on vital statistics. It is mathematical to that extent, and perhaps he is cold-blooded. He has to adjust his finances

to the needs of the situation. A couple of years ago a good friend of mine and a health officer said, "It would be better for the city to spend \$150,000 than to have one death from typhoid fever." It was beautiful as sentiment but rather expensive. A health officer must be a business man. He must talk to business men; get his money from business men. He must show them that he spends his money according to the needs of the situation.

Again in tuberculosis we are fortunate. We need no justification for spending large sums of money. A health officer looks first at the death rate. He finds that 80% of his mortality is due to six or eight big causes. There are two things that will justify him in attacking those causes. He finds those two things are: first, is it a big enough factor to consider; second, is there any hope of getting any result for the money spent? You will excuse me for speaking in this business-like way. I have some sentiment but I have to look at this other side of it. That is the way health officers must look at it. Tuberculosis is one of our great big problems. In total deaths it is one of the greatest causes of our general death rate. Further, it is not a hopeless proposition but is one of the most hopeful with which we have to deal.

There are two general lines of activity that promise large returns. I may seem cold-blooded, but I apologize for that to cover the entire talk. First, to get control of the open case of tuberculosis for as many months as possible prior to his death. We know that he is far more dangerous in the last months of his illness than he is when the disease is in what we call the second stage. Second, to find out and get control of the incipient cases to prevent them from becoming open cases. Those two lines of activity, if pursued under proper direction, with proper diligence and enthusiasm, will cut the death rate from tuberculosis in two in this state inside of five years.

Now how can this be done? We have on the statute books today two excellent laws that make this result possible. The splendid state sanatoria are struggling with the burden of open hopeless cases which prevent the admission of the hopeful incipient case that might be arrested and cured, so that in spite of the splendid efforts of the board of trustees of hospitals for consumptives they are not doing what might be done in the way of prevention. That is, they are doing neither one of these two things. They have not bed capacity enough to take care of the fatal cases in the last months of their illness, nor should they be expected to do such a thing. This is the function of the local hospital. On the other hand, the admission of these cases, which is almost inevitable under existing conditions, prevents the admission of the hopeful case which might be prevented from becoming a hopeless or open case. As it stands at present, the waiting list is so long that the incipient case, which is hopeful at the time he is found, cannot be ad-

mitted until he is beyond the point where he could be saved.

The hospital law provides that cities and towns shall build tuberculosis hospitals to care for their consumptives at home. It works two ways. In the first place it relieves the state sanatoria for the purpose in which they can do the greatest good in this problem—that of taking care of the incipient cases, and it affords the dying consumptive the care and control that is necessary to prevent him from being a menace,—near his home, where he is likely to stay. I will not go into that problem any further. Other speakers will take it up. You know as much about it as I do.

The other law is the dispensary law. In order to follow the second line of activity, to find the cases early and get them under control, to follow up the arrested cases and see that they stay cured, to give proper advice to the tuberculous patient and to his family, it is necessary to have a proper dispensary. The dispensary law provides that all cities and towns of 10,000 inhabitants or over shall have these dispensaries.

One great function that this Anti-Tuberculosis League can perform is to assist in the building of these hospitals. There are certain groups of towns, perhaps four or five towns adjoining, no one of which is large enough to support a tuberculosis hospital but which can be combined in a plan to build a joint hospital. I know of no agency that would be as effective as the local anti-tuberculosis society in effecting this result. Where this result is desirable we have found it to be very difficult to obtain. We find that three or four towns, we will say from 5,000 to 10,000 or 12,000, could, with benefit to all, build a joint hospital. It is good business. It is more economical to conduct a 50-bed hospital than 5 10-bed hospitals. It should be done. We find it is difficult to effect because town A proposes to town B and town B believes that town A is trying to put something over on them. Towns C and D are in the same category and the project falls through. It is in such matters as these that the local anti-tuberculosis societies working together as a unit can stimulate that joint cooperation to build a hospital to take care of four or five such communities.

The other great function that may be performed in the way of aiding the State Department of Health in this campaign against tuberculosis is in the establishment of tuberculosis dispensaries. Under the law before mentioned, if you allow the cities and towns to establish their dispensaries they have only one idea—to avoid paying the fine. They have not any particular interest in what kind of a dispensary, or in what kind of rooms are furnished, or what kind of care is given, or how many cases are found. In fact the fewer found the fewer that will have to be taken care of. I regret to say that this attitude is not uncommon. It is necessary to have some stimulus to arouse public opinion to the point where they will do their duty in regard

to the tuberculosis problem, and the local anti-tuberculosis society can do more good in this way than any other, even more in this way than they can in the establishment of hospitals—not only to see that there is a dispensary but to see that it is the right kind of a dispensary.

The previous speaker, the chairman, Dr. Bowditch, said very rightly that the necessity for these organizations would not disappear for some time. I do not believe that any of us will live long enough to see the necessity disappear. Personally I would place upon them the necessity of policing the local city and town governments to see that they carried out the plans in regard to tuberculosis and did their full duty to the public. In some instances they will have to establish the dispensary themselves and finance it. In other instances the municipal council will furnish the funds to establish the dispensary, but I do not think that relieves the anti-tuberculosis society of its plain duty to see that it is a proper dispensary, and to work with the local board of health. When the board of health will not establish a dispensary it becomes the duty of this organization to establish such a dispensary and to finance it. If they cannot get the local board of health to take charge of it, then they have the saddle on their back and they must carry the load. I hope that appears to you as great a responsibility as it does to me—that responsibility I am going to ask the League to place upon you.

I might say a word in regard to team work. We are setting you the example here in Boston. We have three great agencies working along similar lines and the team-work is an example of what can be done—the Trustees of Hospitals for Consumptives, State Department of Health and the Anti-Tuberculosis League. I can assure you that we have the finest kind of team work. We are going to get results. I ask you to try to establish the same kind of coöperation with your local board of health and your local city government.

In regard to the enforcement of the law it seems to me there would not be any justification for having these excellent laws if we did not enforce them. We have given cities and towns to July 1 to establish dispensaries, and until September 1 to comply with the law in regard to hospitals.

III.

THE PRESENT SITUATION IN REGARD TO LOCAL TUBERCULOSIS HOSPITALS.

By JOHN B. HAWES, 2d, M.D., BOSTON.

Sec. Trustees, Massachusetts Hospitals for Consumptives; Assistant Visiting Physician, Massachusetts General Hospital.

Wise legislation should be the result of a strongly developed public opinion. Sometimes it is in advance of such opinion and at other

times it lags behind. This is shown in a striking way in the working out of the tuberculosis hospital law known as the Isolation Hospital Act, which was passed in 1911. This law requires every city in this Commonwealth to have a local tuberculosis hospital or its equivalent. It was amended in 1912 so that private incorporated hospitals might come under this act. In some cases, such as Boston and Cambridge, this act was quite unnecessary, as public opinion in both these cities, and elsewhere, had already realized the need of a local tuberculosis hospital and had brought about the construction of such an institution. In other instances, comparatively few, it was the passage of this law which aroused public opinion into activity and resulted in the immediate opening of such a local hospital. In other instances the law has apparently been allowed to remain a dead letter until recently; a compliance with it has been evaded by various methods too well known to require enumeration.

At the present time there are in Massachusetts, 54 cities. Of these 54, 18 have local tuberculosis hospitals, each of which has been approved by the State Tuberculosis Commission under the terms of the so-called Subsidy Act. The local hospitals in these 18 cities provide 1042 beds, to which total can be added 40 more from the recently opened Hampshire County Sanatorium, making the total 1082. The total number of cities that have really complied with this law, in that although having no tuberculosis hospital of their own they have made arrangements with nearby cities which are provided with such institutions, would bring the total up considerably higher. Cambridge, for instance, with 88 beds, receives patients, mostly women, from Belmont and Arlington. Fitchburg, with 29 beds, occasionally receives patients from Shirley, Leominster and other nearby towns. Lawrence, with 88 beds, has no extra room for men, but plenty of extra beds for women, and accommodates nearby towns. Lynn, with 60 beds, does the same. The Sassaquin Sanatorium, a privately endowed institution in New Bedford of the highest class, takes care of New Bedford primarily but also accommodates the surrounding towns in the Cape district. Pittsfield does the same. Salem, with 36 beds, has plenty of room for both men and women. For some reason or other, which I have been unable to understand, Salem has placed an almost prohibitive price for board so that nearby cities and towns have not been able to avail themselves of the empty beds in this hospital. Waltham has 17 beds, with vacancies for both men and women, and receives a certain number of patients from both Newton and Watertown. The recently opened hospital in Worcester, with 55 beds, is unable to receive other than local cases. Fall River, with 56 beds, is kept full with local patients.

How far our present health department will go in allowing such combinations as mentioned above cannot be foretold. Each case naturally must be decided upon its individual merits. At

the present time, for instance, Newton, one of the wealthiest cities in the state, has absolutely no accommodation for its tuberculous patients but sends them to the Waltham Hospital or depends entirely upon our state sanatoria. I am quite safe in stating that this situation will not be allowed to continue and that Newton will be forced to build a hospital of its own, and will not be allowed for a much longer time to evade its just responsibilities. Brookline has no tuberculosis hospital worthy of the name. I believe that here also no combination will be allowed with any other town. On the other hand, Cambridge has for some time taken care of patients from Arlington and Belmont. This arrangement seems to work very satisfactorily and will probably be allowed to continue. Recently Melrose has been making tentative arrangements with Waltham and Lynn to care for its tuberculosis patients. I am sure that here no permanent arrangement of this sort will be allowed, as it is illogical in every way. On the other hand, were Melrose to suggest a combination with either Malden or Everett I know that it would be looked upon with favor. There are 18 cities with a total population of 553,000 that have no local tuberculosis hospitals. Lowell, with a population of 106,000, heads this list. It is to be hoped that this city will not be allowed very much longer to continue in its unenviable position. Brockton has so far taken no action in regard to this matter, but depends upon the state sanatoria almost entirely. Aside from this, Brockton has shown commendable activity in its tuberculosis work. Malden has appropriated a small amount and has prepared plans; nothing further, however, has been done. At present patients from this city are sent to Somerville or Cambridge. Newton and Taunton have both prepared plans, but have done nothing further. Everett has a tuberculosis hospital nearing completion. Quincy, Chelsea, Gloucester and Marlboro have prepared plans, but have done nothing else. Revere has made a definite arrangement with the city of Lynn for the care of its tuberculous patients. This is a perfectly logical procedure and will doubtless meet with approval. North Adams, Beverly and Attleboro are considering the matter, but have taken no action; while Melrose, Woburn and Newburyport have as yet done nothing. Among the larger towns which will probably be called upon by the health department to provide themselves with proper tuberculosis hospitals, Brookline, with 27,000 inhabitants, stands first on the list. Brookline town officials seem to labor under the curious impression that there is no tuberculosis in their midst and that they have no tuberculosis problem. It is comparatively easy to dispel this idea, however. Leominster, Peabody, Gardner, Milford and Adams have done nothing. Gardner, however, has a most active and excellent health board and tuberculosis association, and at present seems to handle its local problem in an admirable and efficient manner. Adams has re-

cently taken up the matter, and is preparing plans. Framingham has as yet done nothing. Clinton is fortunate in having a privately endowed tuberculosis hospital of the very highest class. Weymouth, Watertown, Southbridge, and Plymouth have done nothing. Weymouth plans to coöperate with Quincy; Watertown might well coöperate with Waltham. Plymouth is in urgent need of local accommodations of some kind. Webster, a manufacturing town of 11,000, should have some provisions for its local cases. Methuen, Wakefield and Arlington, 11,000 inhabitants each, send their patients to Lawrence, the State Sanatoria, Somerville, and Cambridge, respectively. Winthrop at present sends its patients to Lynn.

This is an outline of the present situation with one exception, which is the question of the county tuberculosis hospital. Last year a bill was passed allowing Hampshire County to construct a tuberculosis hospital. This has been done at Leeds, not far from Northampton. A bill is before the present Legislature, which has been reported favorably, to allow Barnstable County to do the same. Next year it is very likely that Franklin County may put in a similar bill. Each of these counties is distinctly suited for the county hospital idea, there being no large cities but only small, comparatively isolated towns in these districts. This is particularly true of Barnstable County. The difficulty which has arisen so far, and it is apparently a real one, lies in the fact that the present Hampshire County institution is called a sanatorium and is endeavoring to do sanatorium work. This, of course, is not what it was intended for, and is not what is desired. It is, however, quite natural that the superintendent should prefer to deal with incipient cases rather than to take the hopeless and dying ones. I hope very much, however, that it will be made clear and definite that the county hospital, wherever it exists, is simply to take the place of local hospitals and is not intended, in any way, to supplement our state sanatoria.

At the present time the outlook is distinctly encouraging. The greatest factor for good in the present situation is our State Health Department under the strong and aggressive leadership of Dr. McLaughlin.

Dr. McLaughlin, with the backing of an able health council, has wisely decided that this law, requiring local tuberculosis hospitals in every city and in certain towns must no longer remain a dead letter. He has put the proper machinery in motion to see that this law is enforced. He is using the milder methods of persuasion wherever possible, but is apparently fully prepared to use stronger measures in certain instances, too well known to require mention. The result of this activity on his part should mean that in a comparatively short time our state sanatoria at Rutland, North Reading, Lakeville and Westfield will be sanatoria in every sense of the word, where patients only are

received who are physically in such a condition that they can be benefited by real sanatorium treatment, and mentally and morally so constituted that they can coöperate with the efforts of the state to make them well and to restore them to their former place as useful citizens. Our local hospitals, as a part of this plan, will then care for far advanced cases, patients who should be near their relatives and friends, unruly, ignorant and incorrigible patients, who are not suited to our state sanatoria, and emergency cases of whatsoever kind.

Dr. McLaughlin already has the strong backing of the medical profession in his endeavors; to this should be added the sincere, earnest co-operation of every citizen of this Commonwealth.

IV.

LOCAL TUBERCULOSIS DISPENSARIES.

By WALTER G. PHIPPEN, M.D., SALEM, MASS.

Director, Salem Tuberculosis Dispensary.

You all know that Massachusetts now requires all cities and towns with a population of 10,000 or more to maintain a tuberculosis dispensary. In order that we might know how many cities and towns were complying with this act and what their dispensaries were like, your committee sent out a questionnaire to the fifty-four cities and towns that were required to have a dispensary. The answers to this showed that only twenty-two out of fifty-four have such a dispensary. These differ in many respects. Some are controlled by local boards of health, some by local anti-tuberculosis societies, and some by special boards of trustees. Some are associated with general hospitals, some with local tuberculosis hospitals and some are independent of either. Some have nurses or a nurse connected with them and some have not. Some are open one hour a week. Some are open every day. Last year's legislature thought it wise to standardize these dispensaries and gave that power to the state department of health. This department wisely determined that the standard should not be too high, so that it should not prove a hardship to any town, but that at the same time it should be complete in the fundamental things. It has therefore issued a circular of minimum requirements, and ordered that they must be complied with before July 1. At the present time only four of the twenty-two already in existence fulfil these in all respects.

Apparently this order has caused some confusion and one might almost say consternation among the thirty cities and towns that have no dispensary. This is most noticed in the smaller towns that have or think they have only a few cases of tuberculosis in a year, and that therefore they do not need a dispensary. I think this idea comes about from an insufficient knowledge

of what a tuberculosis dispensary is and of the need it fills in a community. I propose, if I can, to show you what constitutes a good working dispensary for a small city or town and what work it should do.

In the first place let us clearly understand that there are two distinct types of dispensaries.

1. A clinic solely for the examination and treatment of patients having, or suspected of having, tuberculosis.

(a) The tuberculosis department of a large general hospital.

(b) The out-patient department of a tuberculosis hospital.

2. An examination clinic in connection with a local agency for all anti-tuberculosis work.

The first type is found in the larger cities and towns and is most adapted to their needs. I shall not consider this type further.

The second type of dispensary should be the center of activity of all local anti-tuberculosis work. It should do more than offer diagnosis and treatment. It should serve as a general information bureau for tuberculosis.

Such a dispensary may be managed by the local board of health or by the anti-tuberculosis association or by a combination of both. In any event both these organizations should work in perfect harmony. There seems to be no good reason why a group of adjacent small towns should not combine in maintaining a common dispensary.

The first requisite of a dispensary is a nurse or social worker, or, as I like better to call her, an instructive nurse. About this instructive nurse the whole fabric of the dispensary is constructed and without her it is of absolutely no value. She need not necessarily be a trained hospital nurse, but she should be familiar with tuberculosis, not only as a disease but as a social problem. She should have at least some training in social service work, and should be able to inspire confidence in patients and officials as well. She must assume the initiative in the tuberculosis work of the community, and must be forceful, stimulating and tactful.

The next requisite is the headquarters. Two outside rooms are required, a waiting room and an examining room. They should be situated in a reasonably quiet, central part of the town. They need not be large but they must be light and airy. Two rooms of this sort in an office building can usually be obtained for a moderate rental, say \$20 or \$25 a month. Not much furniture is necessary to start with. A desk and chair for the nurse, a settee or few chairs for the patients and a chair or stool in the examining room. A tactful instructive nurse can usually get this furniture donated.

The next requisite is a physician. He must be able to recognize tuberculosis in its early stages, be a willing worker, and should be interested in the social side of the disease. One examining physician may suffice at first, but I believe

there should be a medical director and several examining physicians.

The hours during which the dispensary should be open may vary in different localities, but a great deal of care should be used in their selection. Due consideration should be given to the physician's time; otherwise you will not get your staff to come willingly. Also due consideration should be given the patient's time; for instance, a day hour should be arranged to accommodate the school children, because you will have more of them to examine than any other class of patients. The night hour is necessary for arrested cases that are working and for suspicious cases that are working.

If the dispensary is to be of lasting value a careful record of every case must be kept. The general scheme of records, I think, should be uniform throughout the state. In the first place there should be a general card index of all the cases that have been reported to the dispensary. These should be arranged alphabetically and should be numbered. Each card should have a number, which should refer to a folder in which should be kept a history card containing the family, medical and housing history, together with a record of the physical examinations, a nurses' record or social history card, and any letters or notices or information concerning this particular case. These should be filed numerically. A street index should be kept showing every house in which a case of tuberculosis exists, filed alphabetically by streets. It is also well to keep a street index of houses where death has occurred. The history cards are standard Library Bureau cards and can be obtained for about \$12 a thousand. The other cards are also standard and at a less price. I should be glad to show samples of the cards we use to any that are interested.

The addition of a pair of scales for \$12, a few clinical thermometers for about \$4 a dozen, paper napkins \$.75 a thousand, sputum cups \$.635 a thousand, diet lists and leaflets free, and your dispensary is established.

The next question is, what are you going to do with it? It is one thing to establish a dispensary and another to use it. You mustn't expect the patients to walk into the dispensary of their own free will. They will have to be sent, I might perhaps better say, brought there. In short, the dispensary must be fed.

Patients should come through the following agencies:—

1. The local anti-tuberculosis society.
2. The local physicians.
3. The school physician and nurses.
4. Charitable relief organizations.
5. Friends of tuberculous patients.
6. Hospitals (including state sanatoria).
7. Personal applicants.

I put the local association first, because if there is one in the town it automatically provides the machinery for feeding the dispensary.

In many cities and towns the dispensary will doubtless be managed and controlled by the association, and I think every dispensary should have a volunteer association working in perfect harmony with it.

Do not be downhearted if the physicians do not make full use of the dispensary at first. Some physicians, I am sorry to say, feel that they will lose control of their patients if they send them to the dispensary. This is not so and should not be so. The physicians should be given every opportunity to keep in touch with their patients, and pains should be taken to inform them of the results of the examination. If you are patient and do not try to force the physicians to use the dispensary you will find that in time they will be ready and eager to cooperate.

The school physician and his nurses are very important contributors to the dispensary and should supply a very large proportion of the cases. They are in a position readily to discover the anemic and under par children and have sufficient authority to get them to the dispensary. This more or less routine examination is the only way to discover early cases among children, and we all know what good results are to be expected in their treatment.

The various charitable and relief organizations, including labor organizations, should be urged to make use of the dispensary. They may be expected to offer a large number of suspicious cases at least.

One of the most hopeful signs of the educational value of the work is the number of patients brought to the dispensary by old tuberculosis cases. Many new cases are discovered in this way.

If there is a general hospital in the town it will be very glad to make use of the dispensary and will soon be found to recommend all of its tuberculosis patients there. Notice is now sent to every board of health and local society whenever a member of that community leaves the state sanatoria. These should be immediately reported to the dispensary, and they should be looked up and made to report regularly. This is one of the most valuable functions of the dispensary—keeping track of ex-sanatoria patients and keeping them up to the treatment.

In mill towns and cities and in those places that are conducting an active educational campaign personal applicants will be numerous. These applicants may be expected to increase from year to year as the value of early diagnosis is spread among the multitude. In Salem five years ago only a very few applied; last year 54 out of 144 applied of their own accord.

A tuberculosis dispensary differs from any other kind of a dispensary in that every case admitted is always on the active list; even in case of most deaths the family must still be followed, especially if there are children. Therefore the criticism that because a town has only a few cases reported in a given year it does not need a

dispensary, will not hold water. The dispensary is needed because of all the accumulated cases of the past and the acquisitions of the future. Moreover, one new case of tuberculosis may mean ten or twelve additional examinations. If a town has three cases reported one year it may have sixteen the next, as actually happened in one of our towns that has no dispensary. The actual number of cases reported is by no means an accurate index of the number of cases of tuberculosis in the community. In Salem last year we had 114 new cases reported, while during the same time we had 208 cases on our active visiting list, and made 281 examinations at the dispensary. In one town, during a given series of years, seventy-five per cent. more cases died than were reported. Remember your dispensary must keep track of and re-examine all suspicious cases, all ex-sanatoria patients and all children in tuberculous families. This I think may lend a different aspect to the need of a dispensary in some communities.

I have said that the dispensary must do more than examine and treat. It must follow up each patient by means of its instructive nurse. This, I again impress upon you, is the most important part of your work. Let us consider some of the things the nurse will be called upon to do:—

1. Investigate the housing conditions and recommend needed changes.
2. Interview the employer.
3. Provide an outfit for the patient to go to a sanatorium.
4. Provide temporary means of treatment while they are waiting admittance.
5. Provide additional food such as milk and eggs.
6. Obtain the dependent mother's pension.
7. Secure permanent relief for the family.
8. Bring the family to the dispensary for examination.
9. Arrange for the treatment of other illnesses found in the course of these examinations, such as tonsils and adenoids.
10. Obtain the proper orthopedic care for the bone and joint cases. This includes splints, dressings and other apparatus, which requires no end of detail work.
11. Secure proper employment for incipient and arrested cases. This requires also the co-operation of the medical director, who should be the final judge of the fitness of the work.
12. Occasionally cases will be reported by the lower courts, not only for examination, but in conjunction with the probation officers on probation. These cases must regularly report at the dispensary or be seen at home, or in the local hospital, by the nurse.
13. She will be called upon to answer innumerable questions from patients, friends of patients, officials, organizations, ministers and social workers.

These one might call the routine things that she must do and a few cases will give the nurse

plenty to think about if she is new at it. On the promptness and tact with which these things are accomplished depends in a great measure the value of the dispensary.

The amount of help, advice and encouragement given in each case is limited only by the ingenuity and initiative of the instructive nurse.

No doubt some physicians will tell you that they can do these things as well as the dispensary. Perhaps they can or could if they had the time, but they haven't the time to give to the necessary details. After the dispensary has handled a few cases demanding much thought, persuasion and actual labor, you will find the physicians very willing to avail themselves of its services.

I have spoken already of the records. I only further desire to say that they must be kept up to date. The examination must be recorded at the time it is made. The story of the housing must be written up immediately. The record of the nurse's visit must be written as soon as it is completed. Memory should not enter into them. The records are of value only in so far as they are accurate and original. I wish to speak particularly of the street index. In this index are kept alphabetically, according to streets, a list of houses in which there are actual cases of tuberculosis. The value of this is perhaps particularly impressed upon my mind because of the help it gave us in hunting up our cases after our great conflagration. By taking out the cards of the burned streets we had an accurate list of all the cases that had been burned out immediately available. With this list we went through the various camps and places of refuge the day after the fire and removed our cases to a special tuberculosis camp, thus in a measure minimizing the danger of spreading the infection. A special card catalogue of cases coming regularly to the clinic for examination is useful in rounding up delinquents.

I think these facts will show to any one who will think about them that there is need of a dispensary in every one of these cities and towns, or at least in groups of the smaller ones. The question whether the local Board of Health or the Anti-Tuberculosis Association should establish and maintain the dispensary is a question that must be solved in each community. There is much to be said in favor of both. Where there is a local anti-tuberculosis association that is active, much of the preliminary work will already have been accomplished, and if the board of health of such a community elects to establish the dispensary it should at least allow the active workers of the local society to share in its operation. In no case should there be a reduplication of effort. If a local society has a capable instructive nurse she should be made the dispensary nurse. In like manner the interested physicians should be put upon its staff. It must, however, be remembered that the boards of health have the authority to enforce rules and regulations, which a volunteer society has not.

In Salem the Dispensary has always been maintained by the Anti-Tuberculosis Association, and has been dependent upon voluntary contributions, except supplies of sputum cups, carbolic acid, etc., which are supplied by the Board of Health. The Board of Health has, however, always given its hearty coöperation and support, and the two have worked harmoniously together. The Dispensary came by a process of evolution as the work grew. A few interested people, a little money, an instructive nurse, a system of records, a class, small permanent quarters, regular hours, and our Dispensary was established. This process took three years. I hope that what I have said, brief as it is, will show these communities the need of a dispensary and will help them to establish one in three months.

V.

FIRST ANNUAL REPORT OF THE MASSACHUSETTS ANTI-TUBERCULOSIS LEAGUE.

By SEYMOUR H. STONE,
Secretary.

ORGANIZATION.

The need for closer coöperation among those engaged in the tuberculosis campaign of the state having become apparent to the Boston Association, at the invitation of this Association a committee of those interested met on January 8, 1914, for the purpose of organizing an Anti-Tuberculosis League. There were present at this meeting 16 persons from different parts of the state.

The form of organization planned by this committee was presented at the meeting of the Massachusetts Conference on Tuberculosis held March 26, 1914, to which the Anti-Tuberculosis Associations of the state were asked to send delegates. Twenty-two such delegates were present from 13 different cities and towns. A constitution and by-laws were adopted, officers and executive committee were elected and the League formally launched.

PURPOSE.

The purposes of the League are:

To keep the anti-tuberculosis organizations of the state interested in the fight against tuberculosis and informed as to the methods being employed by the state and local authorities.

To assist anti-tuberculosis associations and similar organizations in planning and carrying out local campaigns.

To help organize anti-tuberculosis associations and committees in communities needing them.

To arrange conferences for the discussion of tuberculosis problems.

To secure proper and oppose unwise legislation for the relief and prevention of tuberculosis.

MEMBERSHIP.

Anti-tuberculosis associations and similar organizations may become members of the League upon application to and election by the executive committee. Such associations are entitled to one delegate in the League, and an additional delegate for each 100 bona-fide members. At least for the present no dues will be expected from these associations, but it is hoped that they will see their way clear to contribute something toward the expenses of the League.

All persons interested in the objects of the League may become members by the payment of \$1.00 per year.

The present membership consists of 34 organizations; 22 of these are anti-tuberculosis associations, eight are district nursing associations, two are committees of women's clubs, one is a Red Cross society, and one a committee of associated charities. In addition to these the League has four individual members. Only eight anti-tuberculosis associations in the state have not become members.

COMMITTEES.

Besides the Executive Committee, the League has seven sub-committees, which, since January 8, 1914, have held 20 meetings.

Legislation. The campaign against tuberculosis being so largely dependent, of course, on adequate laws, the League has, during its first year, paid close attention to legislation.

In the spring of 1914 our Legislative Committee made a study of 38 bills before the legislature, while this year it has considered 23 bills.

The chairman of the Legislative Committee and the secretary or some other member of the League has usually presented to the proper committee of the legislature the views of the League on these bills.

The local associations have then been informed of the action taken by the League on the most important of these bills and urged to support such action if they could.

Local Associations and Affiliated Societies.

This sub-committee has corresponded with organizations, and in some instances interviewed individuals or committees in Lynn, Milford, North Adams, Waltham and Greenfield for the purpose of starting some form of anti-tuberculosis work. In one other community the Committee is hoping to be able to coördinate already existing work. The Committee has also helped in starting organizations in Gloucester, Beverly and Lowell, and is ready to render similar service in any other community interested in the stamping out of tuberculosis.

Local Dispensaries. The present field of operation for this Committee is in those cities and towns which have 10,000 inhabitants or over and which are therefore required by law to maintain a tuberculosis dispensary. A study

of these communities, by means of a questionnaire, disclosed the fact that 33 of the 54 admitted having no dispensary, the remaining 21 stating that they had one in some form.

The State Department of Health has now required these delinquent cities and towns to comply with the law and establish dispensaries before July first of this year, and many of them are earnestly endeavoring to meet this requirement.

Local Hospitals and Local Boards of Health. According to information gathered by this Committee 16 of the 35 cities have complied with the law by providing a tuberculosis hospital. In addition to these, two towns and one county have such hospitals. Another county, Barnstable, is seeking permission by legislation this year to establish a hospital. The local hospital situation is, on the whole, encouraging. Many of the remaining 19 cities are either building or have plans under way. The State Department of Health has given these cities until September first of this year to comply with the law which was passed four years ago.

Our Committee has gone on record as favoring the plan adopted by Wellesley and several other towns in combining to employ jointly trained health officers, and urges its adoption by other groups of towns.

Publicity. The work of this Sub-Committee is educational. A small card exhibit, consisting of suitable literature printed in the foreign language common to the section to which it was to be sent was accepted for display in 75 public libraries of the state. A book of "Don't Cards," printed in 19 languages, was presented to six large libraries and 24 anti-tuberculosis associations.

Two printed leaflets were sent out as bulletins for publication in 54 foreign newspapers in the state.

The press bulletins of the National Association for the Study and Prevention of Tuberculosis, which are issued approximately every three or four weeks, have been sent regularly to a list of 245 newspapers in the state. Three bulletins of our own have also been given to these same newspapers. Nine hundred copies of the proceedings of the Massachusetts Conference on Tuberculosis have been sent to those interested in this subject.

The educational campaign has been still further aided by talks by officers of the League and physicians who have given generously of their time.

FINANCES.

Red Cross Christmas Seals. The League was this year appointed state agent for the sale of Red Cross Christmas Seals, the territory including the entire state except Berkshire County.

One hundred and fifteen sub-agents were appointed by the League to sell seals in this terri-

tory. Most of these were anti-tuberculosis associations, district nursing associations and committees of women's clubs. As a result of this campaign, 1,827,982 seals have been sold, the receipts amounting to \$18,279.82. Of this sum 82½% or \$15,080.85 is distributed among the anti-tuberculosis associations of the state for use in their local work; 10% or \$1,827.98, goes to the National Association for the expenses of the campaign and the support of the National Association; and 7½% or \$1,370.99, for the use of this League, out of which the cost of carrying on the local seal campaign must be paid.

The financing of the League is one of the serious difficulties that we have to meet. Since we cannot solicit in communities which already have anti-tuberculosis societies, our territory is naturally limited, and suggestions as to how we shall solve this problem will be very welcome.

Attention should be called to the assistance rendered the League by the Boston Association. In addition to the \$500 donated by the Boston Association to the League, it has given without charge the use of its office, which means rent, light and telephone service, and the services of its office force.

In looking back over its first year's work, we feel sure that the League has fully justified its existence and that with the broadening field that lies before it, it well merits your continued support.

VI.

REPORTING CASES OF TUBERCULOSIS.

By WALTER P. BOWERS, M.D., CLINTON, MASS.

THE subject assigned me has, in many of its aspects, been considered many times in the past decade, either by itself or as a feature of the laws requiring that physicians report contagious diseases. I had supposed that about the last word had been said, but since the secretary asked for a consideration of this matter, there must be a definite reason.

First, perhaps the law and rules of the State Department of Health, are not understood by physicians, or if understood, are not obeyed, and second, it may be that the people are antagonistic either to the law itself or to the way in which it is applied.

The law is clear and definite, as shown in Section 50 of Chapter 480 of the Acts of 1907, where it says that: "If a physician knows that a person whom he is called to visit is infected with any one of several diseases named, or any other disease declared by the State Board of Health to be dangerous to the public health, . . . he shall immediately give notice thereof in writing over his own signature to the Selectmen or Board of Health of the town." A penalty of not less than \$50, nor more than \$100 is provided for refusal or neglect to comply with this law.

Section 49 of the same Act provides that a

householder is obliged in the same way to give notice of the same diseases, and is also subject to a penalty not exceeding \$100.

The State Board of Health has decreed that tuberculosis is a disease dangerous to the public health, and therefore under these sections of the law, both the physician and the householder are required to report cases of tuberculosis.

It is my impression that very little has been done to instruct householders about their duty in this matter, and that most of the effort exerted has been by boards of health, and that confined, to a large extent, to sending circulars of instruction, and cards to physicians, which can be filled out and forwarded.

I also had the impression that the reporting of cases of tuberculosis was done less faithfully than when the doctor is dealing with the contagious exanthemata or diphtheria, but also that there is a gradual improvement taking place as a result of the activities of state and local health authorities, and the publicity campaign carried on by anti-tuberculosis associations.

A series of articles in the *Cambridge Standard* under dates of the 12th and 14th insts., attempts to show that cases of tuberculosis are not reported, and under the heading of "The Doctor Who Does not Report Tuberculosis," puts the blame upon the physician.

If these cases are not reported, the blame should be put upon the doctor, for the laity has not generally been made to understand its responsibility, and the people naturally leave these matters to the physicians.

Dr. L. A. Jones, one of the District Health Officers, prepared a paper, read in 1913, which shows the facts to be almost identical with those claimed by the *Cambridge Standard*.

The doctors are put into four classes:

"1. All doctors do not know tuberculosis when they see it in its early stages. The fullest knowledge of the diagnosis and treatment of tuberculosis is of recent acquirement, and physicians who learned their art two or three decades ago, and have been so busied with practice as to be unable to keep up a progressive course of study, simply do not know what may be termed 'the fine points' of modern diagnostic science with reference to this disease. It is emphatically stated by the highest medical authorities that when the symptoms of the disease become sufficiently advanced for the physician of this type to recognize them, all hope is past for the patient. Not knowing the disease some doctors therefore cannot report it.

"2. Then there are physicians who believe that it is not wise to tell a patient when he has tuberculosis, or consumption. The medical profession is limiting more and more the scope of this practice of secrecy, but it still obtains, where much more harm than good is done by it. Consumption has hitherto been so hopeless that doctors have been silent because of the effect the lay notion of hopelessness may have on a patient. This, however, is seen to be a most

mistaken policy. It is an evasion which sooner or later is exposed, and thus confidence is irremediably destroyed.

"3. Some doctors simply refuse to report either to the authorities or to the patient's family the existence of consumption because of the stigma it is supposed to bring with it. They would shield the patient at the expense of the public.

"4. Other doctors do not tell the patient that he has tuberculosis because the patient is, in certain early stages, unlikely to believe him, to regard him as an alarmist, and to transfer his consultation to another physician. This sometimes leads some doctors to put off with remarks about 'a weak chest' or 'a run-down condition,' what is really a case of incipient tuberculosis needing prompt and strict attention in the proper way."

A secretary of a board of health told me to-day that a certain physician found that after promptly reporting cases no more patients of this class applied to him.

There is a great deal said nowadays about standardizing the various departments of medicine. We are urged to standardize our hospitals, to standardize our surgery, etc., etc., and it may be well for us to recognize some simple working formula in dealing with our patients who present symptoms indicative of early tuberculosis, for the purpose of making clear just what their symptoms indicate, and that a study of the case for a comparatively short time will decide the matter, and for their own good these patients should be willing to cooperate with the doctor in having the case reported while it is even in the suspicious stage. Therefore there may be a field for the activities of our organization in securing more and better cooperation on the part of the people, but we must first secure better cooperation by physicians.

There is in law the theory that every attorney is a part of the machinery designed to secure the administration of justice. There should also be in medicine a strict adherence to the analogous theory that every physician is a part of the health administration of the state, and although not in all instances a member of a board of health, his duty is just as broad and definite as that of the elected official. I fear that average medical practice is quite as apt to fall short of this conception as that some legal practice is perverted from the highest ethical standards.

Here in Massachusetts the law is plain, the rules of the State Department of Health are clear and definite, and every intelligent practitioner knows his duty.

Because of the natural alarm usually experienced by the patient and friends, and the prejudice aroused in having to be investigated and controlled by authorities, we must feel the greatest sympathy for those directly concerned, and should make all possible effort to relieve one already suffering mentally and physically, from unnecessary annoyance, and lead rather than

coerce a patient to cooperate with the authorities. But to the medical man the problem is simple, direct, and does not admit of elasticity. All doctors who do not loyally comply with the law should be made to do so, first, because it is a duty which one owes to the state, and, second, because of the advantages to the patient.

The duty to the state is to prevent disease, and the state is in the first instance dependent upon the practitioner to put into operation the proper machinery for the control and elimination of the danger.

In order to do this, all facts pertaining to the prevalence of the disease must be available, and to be of the greatest value must be known early. Where it is found that the mortality records exceed the morbidity records, there is a reasonable ground for criticism, for where people die of tuberculosis without having been reported, the disease has existed uncontrolled. Present knowledge, if put into operation, is undoubtedly sufficient greatly to reduce the economic loss from tuberculosis.

The great majority of people can be influenced to cooperate with any plan which promises better conditions if dealt with diplomatically, and it is possible that progress is hampered more by indifference and ignorance of some physicians than by the laity.

Sanatorium officials and other experts have supported the assertions made above and have told me that the doctor of average ability cannot or will not recognize tuberculosis in its early stages. If the average doctor does not, then most of the practitioners below this status surely will not.

Their failure to recognize the disease early is due either to inability to understand the problem involved or to the fact that some practitioners have not taken time to familiarize themselves with modern diagnostic methods, or devote sufficient time to each individual case. Sometimes the popular busy doctor is one of the offenders, and his methods may support the statement sometimes made that the doctor to be avoided is the one who may be popular, and hence overworked. If these contentions are sound, they constitute a scathing arraignment of the profession, and we should look for the remedy.

This remedy seems to lie in efforts to educate physicians already in practice and also in an education of the law makers who hitherto have declined to enact a good registration law; and constant effort should be made to lead the people to understand that there is danger in the incompetent practitioner of medicine, and uniformly good medical service can never be secured until the law requires that every registered physician shall be well trained.

Massachusetts has been one of the fields for the work of the medical pretender, and we are living under the shadow of that calamity which gave state license to all medical frauds who had been deluding the people for a period of three years or more, for all such were allowed by the

medical practice act to continue to fool part of the people all the time, and even now the state makes it possible for untrained men, who have a memory sufficiently active to repeat that which may be culled from quiz compends, to be registered.

Dr. Holmes, you know, regarded mere memory as the lowest intellectual attainment, and yet our system does not require that a man must be trained to use his eyes, ears, fingers or reasoning faculties, to become a practitioner. If he can write from memory a reasonably good book, he can sometimes secure registration. Even under this defective law many imperfectly trained men are rejected, but the board having this matter in charge is handicapped in not having the right to require that a man shall have been properly educated before securing the privilege to practice.

The state, for the protection of its citizens, should either amend this law, making it obligatory that applicants for registration should have had good training, or else it should provide the means for examinations which would be a sufficient test. Such examinations would have to last over a period of weeks to be of value, and are unnecessarily cumbersome.

This organization should be interested in medical legislation, and demand of the law makers that Massachusetts shall have at least a good average law. When such laws shall have been enacted, the usual natural process of death will gradually clear the state of the low grade doctor.

The remedies then, so far as doctors are concerned, consist in a better medical registration law, and an enforcement of the health regulations, and here we come to another matter which needs correction.

The law requiring reports of cases of tuberculosis is good. The administration of this law, not as it should be.

As a preliminary to the study of this subject I asked for information from boards of health and secured 109 replies. These replies show that in 29% of the reported cities and towns the law is not complied with, and in these 31 cities and towns the proportion of unreported cases runs from 12% to 100% of the cases known. Only three boards of health report prosecutions under the law.

This is an arraignment of the boards of health. In order to sustain my contention, let me give you their own testimony. I will only read a few reports. One questioned my authority to ask these questions, and I replied that I had no official authority, but that as a citizen of the state, asking information, I had intended no offense, and asked this official to come to this meeting. I hope he is here.

RECAPITULATION.

The state recognizes the importance of reporting cases of tuberculosis, and has made laws requiring this procedure.

The laity rarely comply with the law.
Physicians frequently do not comply with the law.

Twenty-nine per cent. of the boards of health do not enforce this law.

REMEDIES.

Educate the people.
Adopt a better medical practice act.
Make the doctors comply with the law.
Make boards of health enforce the law.

VII.

TUBERCULOSIS ASSOCIATIONS AS HEALTH EDUCATORS.

BY MICHAEL M. DAVIS, JR., PH.D., BOSTON.

Director of the Boston Dispensary.

TEN years ago the campaign against tuberculosis was a dream in the minds of a few enthusiasts, who, in 1905, organized the national association for the study and prevention of this disease. Today the campaign is a great national movement with associations in every state and many cities and, counting private and public funds together, it is spending \$20,000,000 a year.

The movement has developed hospitals, sanatoria, dispensaries and visiting nursing; but above all, a great educational campaign. Twenty million dollars are not taken from taxes or from philanthropic purses unless tax payers and givers believe that the results justify the expenditure. The belief that expenditures to relieve and prevent tuberculosis are worth while has been developed in the public mind through a persistent process of education. Last autumn 44,000,000 Red Cross seals were sold in the United States, nearly 2,000,000 in Massachusetts, and every Red Cross seal is a teacher. The anti-tuberculosis campaign has been first and last an educational campaign, as all "reform movements" fundamentally are.

With such remarkable results as the ten years' fight against tuberculosis has shown, the time has gone by when tuberculosis associations need devote much attention to explaining the importance of preventing this disease. The general campaign of education has largely completed itself and the public now needs education on specific points. The tuberculosis germ has proved itself a money-raiser. The time has come when, under the slogan of preventing tuberculosis, and with the leverage and the money which the anti-tuberculosis campaign furnishes, a broad health campaign must be waged, while at the same time attention must be devoted to the education of the public on specific questions of importance, for the reduction of waste or inefficiency in present anti-tuberculosis work.

The very success of the anti-tuberculosis campaign has brought with it two dangers. First,

that of over-specialization, a danger which creates, as it were, a vested interest in preventing tuberculosis, and fails to see its intimate relationships with other phases of militant public health work. The second danger is the popular fear of tuberculosis, which has been so developed as a by-product of the educational campaign that it acts in many ways as a handicap upon existing work and upon further progress. Anti-tuberculosis associations in their capacity as educators must devote themselves to informing the public that while it is well to fear tuberculosis, it is not well to fear it in the wrong way.* The dread of the disease should be based on information as to how the infection is most likely to be carried. They must understand that the way in which infection is usually carried renders a tuberculosis hospital harmless, either to life (or property values) in its vicinity; but that, on the other hand, an active consumptive in the midst of his home and family is dangerous to wife, neighbors, and above all, to the children.

Tuberculosis associations have issued millions of "don't cards." A card with one half headed "When to Fear Tuberculosis" and the other half "When not to Fear Tuberculosis" might be worth considering. Fear is a lever if it is intelligent; but a clog when it merely represents ignorance or half-knowledge.

As health educators, anti-tuberculosis associations must teach the public to stop the waste of money and effort which arises from the discharge of sanatorium patients without adequate supervision after they leave the institution.

The reports of the state sanatorium trustees have emphasized the value of the worker now engaged in this service,—a value not only to certain individual patients, but in stimulating greater activity and effectiveness of local bodies in supervising tuberculosis. The public must be educated to understand that it is not economy to see this work stop with the provision of only one worker; that further provision, correlating the sanatoria with local communities will much more than pay their cost; for the annual expense of the state sanatoria is over \$600,000.

As health educators, tuberculosis associations must educate both the doctors and the public towards the early diagnosis of the disease. It is already well recognized that this should be among the features of the campaign; but how make it a more effective feature? It seems as if the time had come when the most effective way to demand early diagnosis of tuberculosis is to call for frequent, periodical, general medical examination by skilled physicians. People may fear to go to a clinic or office which bears the label of tuberculosis; but they have no ground to dread a general medical examination. It is particularly fitting that we should use the public interest in

* Such studies as that of Dr. H. B. Lampson (U. S. Public Health Reports, January 8, 1915) supply excellent educational material. The general public should know that "ordinary exposure such as everyone encounters" was found in Dr. Lampson's studies to bring only 8% of infection, while intimate exposure brought 78%. Such concrete studies when made known to the lay public carry conviction as to the manner in which the infection is spread; while general statements glide too easily in and out of mind.

tuberculosis as a lever in the broader campaign for better medical supervision of all persons, for no disease is more dependent upon general living conditions than is tuberculosis.

As health educators, finally, anti-tuberculosis associations must strive to stop the waste arising from the development of more and more specialties. I have spoken of over-specialization as one of the dangers to which the tuberculosis campaign has led. A string of "public health movements" has followed in the wake of the anti-tuberculosis campaign. There are now societies to prevent infant mortality; to promote better obstetrics and establish pre-natal clinics; societies for school hygiene, for mental hygiene, etc. Each of these agencies is pushing forward special health needs, is advancing a special technique, and is putting doctors, clinics and visiting nurses into the field. Even in smaller communities often two or three, or perhaps four, of these special health interests will be actively engaged in field work. The anti-tuberculosis association may well strive to pool the health interests of a locality and coördinate the special clinics or nurses in one cooperative group, whether they are maintained by a city or by private agencies. Clinics may be combined in one building, the work of different nurses may be coördinated or generalized; and this without the impairment of the integrity of the different organizations supporting the branches of the work. Such pooling of health interests will mean financial economy and gain to public health. Inasmuch as no movement is more dependent for its success on the general advancement of public hygiene than is the anti-tuberculosis movement, none will profit more by this coördination of special activities.

The time has come when tuberculosis associations must be health educators, because this is the more effective way to be tuberculosis educators. The anti-tuberculosis campaign must be a public health campaign, if it is to be most effective. Let public health be on the banner borne on the front of the car, while the public interest in preventing tuberculosis, already aroused, will furnish the gasoline.

VIII.

THE RESPONSIBILITY AND OPPORTUNITY OF THE TEACHER IN PREVENTING TUBERCULOSIS.

By THOMAS F. HARRINGTON, M.D., BOSTON.

Director of School Hygiene, Boston.

MUCH of the apparent disagreement among authorities relative to the prevalence of tuberculosis among children is due to the fact that a distinction is not made between a tuberculous infection and a tuberculous disease. It is now admitted generally that all persons are infected with tuberculosis at some period of life. The great majority recover without ever knowing

that they had been infected. In childhood, it is very difficult to detect tuberculosis either by physical examinations or by recognized tests. Reliable data at hand demonstrate that relatively few infected children go on into the tuberculosis state. All infected in the first year or two of life die. Only ten per cent. of all deaths from tuberculosis occur during the ages of five to twenty years, inclusive. Even in families of the tuberculous, the infection of the exposed children is hard to demonstrate. In Boston, there are 7000 cases of positive tuberculosis on record at the office of the Health Department; these people live in 1340 families in which there are 2131 children of school age. A recent study of these children, by which the school nurses secured a report from the family physician or from a hospital clinic, showed that only 304 of the children had tuberculosis in a form that could be diagnosed. A later study of 196 children diagnosed as positively tuberculous confirmed this diagnosis in only eleven cases. Fourteen children of the group were diagnosed as doubtful; forty were deferred for subsequent observation, while 92 children of the group were returned to school as negative cases. A study of over 90,000 pupils in our elementary grades shows that five per cent. of the children were anemic, glandular, or under-sized. In other words, they were physically below par to a degree requiring preventive measures if they were to be saved from genuine tuberculosis. All reliable evidence today demonstrates that the education of the public in the cultivation of hygienic habits of living is the most effective means of combating tuberculosis. Obviously this leads us at once to the class-room. Here are grouped by compulsion, for a long period of the formative age of children, about one-fifth of the population. The opportunity to establish right habits of living is far greater in the school than at any other period or place. This the state of Massachusetts recognized early in the enactment into law that "schools shall give instruction in physiology and hygiene," and further that "in each of the subjects of physiology and hygiene, special instruction as to tuberculosis and its prevention shall be taught as a regular branch of study to all pupils in all schools supported wholly or partly by public money." Other subjects may be taught, e.g. algebra, geometry, language, natural science, kindergarten training, manual training, etc., if the school committee thinks such teaching expedient. Furthermore, the statute provides that every city and town of 10,000 or more inhabitants shall maintain a school in which the subjects of physiology and hygiene shall be taught, and towns which do not maintain a school as required by the statute shall not be entitled to its portion of the appropriation allowed from the "Massachusetts school fund." Nor does the responsibility of the school end here. A further act is mandatory in its provision that "the school committee of each city and town shall appoint one or more school

physicians, who shall make a prompt examination and diagnosis of all children referred to him, and such further examination of teachers, janitors, and school buildings as in his opinion the protection of the health of the pupils may require." Also that every child in the public schools shall be separately and carefully tested and examined at least once in every school year; and further, the school committee is required to keep a physical record of each child and to give notice to the parent or guardian concerning the defects or disability requiring treatment. The statute also places upon the State Board of Education and the State Board of Health the responsibility for carrying out the provisions of the act, including the giving of adequate instruction on these subjects to the pupils in the normal schools. Later legislation requires that all children under sixteen years of age, seeking a working certificate, shall be in good health, sufficient to undertake the work for which the application is made. We might go even further and point out the dangerous trades and occupations which minors, eighteen years of age and less, cannot enter; these trades and occupations require that teacher and school physician shall have some knowledge of the processes involved if they are to act as guides to the pupils entering vocational life. The limited time at my disposal necessitates the restriction of the whole problem to two points only, namely, first, in what manner is physiology and hygiene teaching being carried out; and secondly, what can this state anti-tuberculosis association do to aid in efforts to meet the requirements of the statutes on these subjects. Let us divide the problem into:—

1. The teaching of physiology and hygiene.
2. Medical inspection.

THE TEACHING OF PHYSIOLOGY AND HYGIENE.

Data collected recently from most of the cities and from many of the towns justify only one conclusion, namely, that no subject in the curriculum is so neglected or so inadequately taught as the subject of physiology and hygiene. Many superintendents write candidly that nothing is being done in their communities to carry out this law. Others present a course of study in which less time is allotted weekly to this subject than to any other subject in the daily program. In only a few cities is any special instruction given in the prevention of tuberculosis. There is little or no definite policy carried out, other than in notable exceptions, covering classroom temperature and open windows. Only two courses of study show any correlation between such habits as cleanliness, good teeth, food, sleep, fresh air and sunshine, and the daily home life and school life of the child. The opinion of the superintendents seems to be unanimous that the cause for this state of affairs lies in the lack of preparation of the teacher for the responsibility placed upon her by the statute. In the normal school, where any attention is given to this spe-

cial subject, the course of study is so scientific and so overloaded with anatomy often that it defeats its own object,—namely, to give the teacher-pupil a preparation in methods of teaching the subject in the grades.

The prevention of tuberculosis is not given serious consideration in many of the normal schools.

MEDICAL INSPECTION.

Here the situation is akin to that of physiology and hygiene teaching—namely, inadequate preparation for the work and the lack of a just appreciation of the responsibility involved. Many physicians here and there are making great personal sacrifices to do this work well. On paper, many cities have a very attractive organization; too many communities fail to recognize the tremendous power of health supervision in raising the physical and mental standard of the group as well as of the individual. In only a few cities and towns is there any team work between the health and the educational departments. Little or no medical inspection can be effective unless the teacher is prepared to select the children needing medical care. Normal schools and medical schools are not giving their pupils special preparation. Medical inspection without a "follow up" by school nurses is in the vast majority of cases (more than 90%) a waste of time and statistical gathering only. No remedial or corrective results follow such an inspection. On the other hand, there is a decided trend to rely upon the teacher and nurse combination without the guidance of a school physician. No school principal nor superintendent should take the responsibility of this problem unaided by some medical authority. In summing up, therefore, it can be said that an organization such as this association can do a great good in cities and towns, first, by urging school and health authorities to get together to carry out the statutes quoted above; second, by requesting school authorities to legislate that windows in class-rooms be kept open and that room temperature be kept between 60 and 65° F; third, by establishing open-air classes for the debilitated children who are not frankly tuberculous; fourth, by providing literature on tuberculosis prevention for distribution in the schools; fifth, by demanding that teachers and physicians be prepared, in normal schools and in medical schools, for this special work.

IX.

MEDICAL INSPECTION OF SCHOOL CHILDREN.

By FRANCIS LEE DUNHAM, M.D., BROOKLINE, MASS.

INVESTIGATIONS in the department of school hygiene comprehend as many factors of social as of medical or educational importance. Consequently an intimate coöperation between the

school and existing social agencies should be encouraged. The logical approach to the problems of the tuberculous child is through intelligently directed school health supervision. It is toward this specific aspect of the subject that the following suggestions are directed:—

The difficulty encountered in changing long established reactions in adults is generally recognized. It is next to impossible to change an unintelligent parental attitude toward oral hygiene, adequate bathing, proper ventilation, sex hygiene, and other refinements tending toward physical and mental efficiency. Yet intelligent direction in the schoolroom shows definite, practical results. As an example, contrast the daily use of the tooth brush by 98% of the children in a school with poor environment, following six months' instruction, with less than 40% at the opening of the school year. The result is a permanent improvement in the personalities of the children themselves, and is the most logical approach to an intelligent parenthood.

The school child as a potential focus for tuberculous infection cannot receive too insistent attention. One is constantly discovering adolescent children who bear the scars of early infection. The number of anaemic, malnourished, neurasthenic children, suffering from a tuberculo-toxemia of unrecognized causation is distinctly correlated with the pallid children of pent-up schoolrooms. The scant recognition given to a thorough examination of the 700,000 school children of Massachusetts is mirrored in the inadequate returns made to the State Board of Health respecting the prevalence of the disease.

Although adequate ventilation is recognized as the most potent factor toward securing efficiency from both mind and body, schoolrooms are allowed to be sealed during the winter months. The employment of teachers and janitors of deficient physical health and hygienic training is largely responsible for this unfortunate state of affairs. The acute, infectious cold, which is the basis of much later infection, could be rendered a far less potent cause of disorganization if all schoolrooms were overflushed with open air night and day. I have kept a winter schoolroom at a temperature of 60° with no complaint of discomfort from pupils and with increased mental efficiency. However, such a condition presupposes a healthy teacher and an intelligent exercise of judgment as to change of posture and the use of overgarments, if asked for.

The tendency to regard artificial fumigation as an adequate bactericidal measure in inhibiting contagion is a highly fallacious one. The fumigating plant at the disposal of the ordinary town board of health is perfectly useless save for moral effect. This may be easily proven by any one caring to take the requisite experimental trouble. Desks, seats and floors, thoroughly washed with hot, alkaline, antiseptic solutions and the abolition of dust-collecting oils

will render virulent, incubating chambers, sanitary classrooms.

The development of a constructive, school hygiene through the employment of specially trained persons to act as assistants to the health inspector will greatly assist the present unsatisfactory service. Such assistants should be thoroughly trained in the technic of hospital nursing, social service, and school hygiene; they should be carefully chosen and adequately paid.

To summarize I would suggest:—

1. Individual instruction in school hygiene.
2. An increased professional activity.
3. Insistence upon open windows.
4. The development of a constructive policy toward school hygiene assistants.

X.

TUBERCULOSIS WORK IN THIS STATE.

By AMY F. ACTON, BOSTON.

Chief Inspector of Incorporated Charities, State Board of Charity of Massachusetts.

YOU may be interested, at the outset, to learn how the work of the State Board of Charity fits into the supervision of private charities, in which category are included the anti-tuberculosis organizations.

The statutes covering the subject are found in acts of the legislature which severally provide that before issuing a charter for charitable purposes, the secretary of the Commonwealth shall refer the matter for investigation to the State Board of Charity¹; that after incorporation, the board shall annually visit and inspect the work of such organizations as consent to or request such inspection²; and that such charities shall report annually to said board.³

Under the act providing for inspection, the various incorporated anti-tuberculosis associations have been visited from time to time and information gathered as to their policies and methods.

NUMBER OF ANTI-TUBERCULOSIS SOCIETIES IN STATE.

In the 353 cities and towns in this Commonwealth, there are 34 organizations for anti-tuberculosis work which are more or less active. Eleven of these are incorporated anti-tuberculosis societies and six are committees affiliated with other incorporated agencies, such as district nursing societies,—a total of 17 agencies coming within the inspection law.

Twenty-five out of the total 34 private agencies are situated in 24 cities and towns having more than 10,000 population,⁴ and there are 30 communities with more than 10,000 inhabitants in which there is no private agency for anti-tuberculosis work. Eleven of those thus left uncovered have more than 25,000 population. There is, therefore, work awaiting anti-tuberculosis agencies yet unborn.

STANDARDS.

In estimating the value of the work of the various anti-tuberculosis societies, we must first consider the standards by which to measure that work.

Failure of these agencies in the past to standardize and put the right valuation upon their various activities is undoubtedly responsible in large measure for the lack of uniformity in their aims and methods and the failure of several of them to carry on effective work.

It appears to be the well settled opinion of those who have studied the situation that the private anti-tuberculosis organizations should, so far as possible, confine themselves to the education of their communities in the best methods of preventing the inception and spread of the disease; that is to say, it is their part to do the educational work. If for any reason they deem it wise to take on activities that are outside the scope of educational work, opinion seems to indicate that they should do so with the intention of demonstrating the need of such activities and of transferring them to other agencies as soon as practicable.

The reasons for urging the anti-tuberculosis societies thus to confine themselves to the education of the public are: (1) the great need of such work and the fact that only private funds can be used for such a purpose; and (2) that the task of seeking out and caring for those afflicted with the disease, and the cost of the work, are of such magnitude that private societies cannot handle it, while the tax payers have assumed it as their rightful burden. As a part of the state policy for caring for the individual, we have sanatoria for curable cases, and state laws providing for the establishment of municipal hospitals in cities⁶; municipal dispensaries in cities and towns with a population of more than 10,000⁶; the medical examination of school children⁷; the instruction of school children in avoiding the disease⁸; and provision for the reporting by physicians and householders to the local boards of health of cases of tuberculosis.⁹

With such provision, and adequate laws requiring the municipalities to assume their obligations, it appears to be the province of the private societies to encourage and stimulate their communities to do the work assigned to them rather than to relieve them of it.

Let us see what the various anti-tuberculosis societies are doing to assist in the development of this state policy.

First. Are they endeavoring to awaken public interest in regard to the law requiring the cities of this Commonwealth to maintain tuberculosis hospitals?

In 16 of the 35 cities and in 3 towns,¹⁰ there are 21 such institutions which have been approved by the trustees of the hospitals for consumptives. In another city, a hospital is being built. Two of this number are maintained by anti-tuberculosis societies. During their last

fiscal year, they cared for a total of 243 persons, and their expenditures were \$38,238. These two societies are doing almost nothing along strictly educational lines, and instead are assuming the tasks which belong to their own municipalities.

Of the 19 cities which have not yet complied with the hospital law (8 of them having over 32,000 population), 7 had anti-tuberculosis societies which died of inanition; while 8 have existing societies. Of these latter, 3 do nothing along educational lines and 4 do little. The other, which is quite active, has not urged the erection of a hospital by the city as there is reason to think that a private individual will assist in its establishment. There are, therefore, opportunities for anti-tuberculosis societies to assist in getting municipal hospitals in these cities by adopting active educational methods to arouse public opinion.

Second. Are the private anti-tuberculosis agencies endeavoring to awaken interest in the law requiring cities and towns with more than 10,000 population to establish tuberculosis dispensaries?

Of the 54 cities and towns coming within this law, 31 have not complied with it. (One of these cities has just provided for a dispensary in its budget.) Seven of these 31 cities have more than 32,000 population, and 8 of them have existing anti-tuberculosis organizations. Only one is very active along educational lines. Fifteen of the 31 localities have never had anti-tuberculosis organizations, while 8 have lost them by death.

Of the 23 existing dispensaries, a number are below the minimum standard set by the State Department of Health, in respect to having no evening hour, no medical staff, etc.; 8 are carried on by private anti-tuberculosis agencies, 2 of them in cities already provided with municipal dispensaries. One society is now endeavoring to get the Board of Health to take over the clinic which it has conducted for several years.

Third. Are the anti-tuberculosis societies endeavoring to awaken public interest in the enforcement of the law requiring medical examination of school children, which is required in every city and town in the Commonwealth?

Some of the societies believe that this work is not well done in their communities. No statistics on this point have been gathered by the State Board of Education since June, 1913. At that time, replies from the cities and towns indicated that in a number of localities no physician had been appointed, that where a physician had been appointed not all of the children were examined, and that in many instances the examination was largely confined to the eyes, nose and throat. With few exceptions, the unsatisfactory replies were from small communities. Four of these places have anti-tuberculosis agencies at present. One of the most serious problems in this connection is the entire lack of medical inspection in many of the children's institutions

whose inmates do not attend the public schools. An instance recently came to my attention where three such children, a boy and his two sisters, were found to be affected, two of them being in an advanced stage of the disease when they were removed from the institution. This question of bringing about an adequate medical examination of public school children and other children of school age, and also of instructing them in the cause and prevention of tuberculosis, presents many opportunities for educational work on the part of these societies.

Fourth. Are the societies striving to awaken public interest in the enforcement of the statute requiring cases of tuberculosis to be reported to the local boards of health? Seven organizations believe that the law is not well obeyed, and yet six of these do but little work on educational lines. This measure is so important and the failure to enforce it so often indicates an inactive board of health, that the anti-tuberculosis societies can well afford to undertake an active campaign to interest the public in this direction.

Turning from the state's formal program for controlling tuberculosis, and the part which the anti-tuberculosis societies are taking to educate the public to carry it out, let us consider what work remains to be done by private funds and what agencies are doing it.

1. Instructive and home nursing in tubercular cases:—

Fifteen anti-tuberculosis agencies, some of them in the larger industrial cities, employ nurses to instruct patients in their homes. In some of the cities where this is done the local boards of health already employ one or more nurses for this purpose, so that in these instances the societies supplement what they believe to be inadequate service on the part of the municipality. This visitation and instruction of individual patients is conceded by most of those who have carefully considered the matter to be the duty of the local boards of health. If this view is correct, the societies should not regard their instructive work as a permanent feature, and local boards of health should be urged to take it over as soon as practicable.

Several societies which formerly employed nurses for instructive nursing have adopted this view and have since devoted all their energy to work on educational lines. One newly organized agency plans to employ a nurse for a short time to make an investigation as to whether the community needs a dispensary. This is in accord with the theory that the workers in these agencies should devote themselves to gathering information as to the needs of the community and disseminating such information.

It is even more generally conceded that the anti-tuberculosis societies should not attempt to care for bedridden patients. This is not generally done, though in two cities the instructive nurses are inclined to do more or less home nursing of tubercular patients, instead of turning them over to the local nursing associations,

which are willing and able to care for them. One anti-tuberculosis agency which does not cooperate well with the visiting nursing association in this regard devotes itself wholly to individual work with patients and does nothing on educational lines.

2. Providing tubercular patients with material relief.

At least seven anti-tuberculosis agencies undertake to provide material relief, chiefly in the form of milk, eggs and other food suitable for tubercular patients. In five of their communities there exist societies for organizing charity. Three of these latter agencies are well equipped to handle all relief problems in families where tuberculosis or other sickness or misfortune is the cause of poverty. When an anti-tuberculosis society furnishes relief in a community which supports a well organized associated charities or a relief society, such a step involves not only duplication of work but a departure from the best recognized standards set for private societies in the field of tuberculosis prevention.

It is easy to understand that local conditions or lack of resources in the community have made it necessary for agencies in some instances to maintain a hospital or a dispensary, give instruction in the homes of patients, furnish material relief and find suitable work for patients in whom the disease has been arrested. The important thing is that they should regard these as temporary activities and endeavor to turn them over as soon as possible to some appropriate agency. Only by so doing will they be in a position to enter upon an active campaign of education.

As I conceive it, the work of the private society is to gather information touching the cause and prevention of tuberculosis by studies and other means; to disseminate it as widely as possible; and to interest the public to support necessary legislation.

The societies which are doing the most active educational work employ popular lectures, moving picture films, exhibits in schools, shop windows, etc., leaflets in different languages, popular articles in the press, competitive essays by school children, and all other educational methods which human ingenuity can devise. Ideas presented thus reach a vast number of persons at a stage where suggestions for avoiding the disease may be helpful and before control becomes necessary. This, from the viewpoint of state inspection, should be the work of the private society which enlists in the fight against tuberculosis.

REFERENCES.

- ¹ Acts 1910, Chap. 181.
- ² Acts 1908, Chap. 379.
- ³ R. L. Chap. 84, Sec. 14, amended by Acts 1903, Chap. 403, amended by Acts 1913, Chap. 82.
- ⁴ Malden has two agencies.
- ⁵ Acts 1911, Chap. 597; 1912, Chap. 637.
- ⁶ Acts 1911, Chap. 574; 1914, Chap. 408.
- ⁷ Acts 1910, Chap. 357; 1911, Chap. 269.
- ⁸ Acts 1908, Chap. 181.
- ⁹ Acts 1907, Chap. 480.
- ¹⁰ Three institutions in Boston.

Medical Progress.

A REVIEW OF SOME OF THE RECENT LITERATURE ON PERICECAL BANDS AND ADHESIONS.

By WILLIAM JASON MIXTER, M.D., BOSTON.

It is safe to say that there are at least three types of adhesions: (1) excessive embryonal fusions, (2) inflammatory and traumatic processes, (3) mixed. During the past two years we find an increasing number of writers who lean toward the embryonic origin of these structures, some of whom are on record in the past as believing them to be largely inflammatory. It seems certain that during fetal life there is a mysterious sort of adhesive peritonitis with a selective action on certain folds of the peritoneum, which accounts for the fixed portions of the intestinal tract (Bryant¹). Just how this process takes place is not known, but if one thinks of the contents of the peritoneum becoming more or less adhesive during the evolution of the colon in fetal life, all the findings would be explained. The whole mesentery of the large intestine becomes adherent, each portion to its own chosen structure except that of the sigmoid. This is a very extensive process and it is easy to see that comparatively slight variations would lead to important anatomical changes. Suppose the process is very active on the ascending colon, Jackson's veil is the result from the dragging over the intestine, by its adhesive property, of a fold of peritoneum, much as one pulls up a blanket on a cold night. If the process runs up on to the mesentery of the lower ileum, the intestine rolls up in its own mesentery and we get a Lane kink. Naturally, different writers show minor differences of opinion, but this seems to be the fundamental idea as expressed by Mayo,² Eastman,³ Summers,⁴ Fallon⁵ and others. The possibilities are endless, and it is easy to see that the resulting abnormalities would at least be very similar to the results of peritoneal infection. It is probable that pericecal membranes are present in at least 15% of children (Albrecht⁶), while Eisendrath and Schnoor⁷ and Fallon⁵ claim that Jackson's veil is a fold which is always present to a greater or lesser extent. They say that the Jonnesco and the Jackson veils are synonymous. The structure is a reduplication or fold of peritoneum constantly found during fetal and post-natal life and varies greatly in vascularity. The upper border is at the hepatic flexure and the lower is usually 1 to 1½ inches above the lower border of the cecum, although in some cases they found it covering the whole cecum and part of the appendix.

Another embryonic process which it is necessary to note in this connection, although it involves the cecum only indirectly, is the Lane kink. The mechanism of this abnormality is much clearer and can be explained as a rolling up of

the terminal ileum in its own mesentery. There may be variations, but this is the fundamental process. Campbell⁸ found the condition present to a greater or less extent in 18% of a series of cadavers.

To take up next the adhesions of infectious or traumatic origin—they are so diverse both as to cause and position that it is only necessary to mention the appendix as the commonest single cause and that their varieties may be endless. A good example of this process is the deformity of the lower ileum caused by appendicitis when that organ lies against its mesentery. The resultant scarring of the peritoneum may draw the terminal ileum downward in such fashion that it almost exactly simulates a Lane kink of embryonic origin. The same may also be true of tubal inflammations. Eastman³ partly differentiates such processes from the congenital type by absence of blood vessels. The main difference is the fact that they are usually, but not always, firm, white, localized bands of bloodless connective tissue. They seldom show any orderly arrangement as the congenital veils do, and may catch any loop of bowel. They are often fine string-like processes. If the omentum is involved, it usually springs straight across to the site of inflammation about the cecum without any intermediate process between it and the ascending colon, as is the case in the congenital type.

It is easy to see that the embryonic process results in strong points of support for the colon throughout nearly its whole extent. If these supports are unduly narrowed at any point or if they draw across the gut, they will cause angulation or constriction of its lumen with resulting stasis after the musculature loses its tone. If there is unusual overloading of the intestinal tract due to loss of habit of defecation or any other cause, the same angulation will occur at points of support which under a lighter load would act properly. Under these circumstances they become danger points, and by causing increasing stasis with its resulting putrefaction give rise to mild grades of colitis and pericolicitis.

This brings us to the commonest type of case seen at operation,—the mixed type. In this, the congenital type acts as a forerunner to the chronic adhesive process of adult life with its persistent low grade infection and its ever-increasing obstruction and stasis, thus forming a vicious circle. Associated with this is the increasing density of the embryonic structures due to the tugging of prolapsing organs or a mild degree of inflammation, as pointed out by Pilcher.⁹ When such cases come to operation, it is very difficult to tell where the embryonic process ends and the inflammatory one begins. Luckily this makes comparatively little difference surgically.

We now come to the mobile cecum of Wilms. Here again developmental conditions play a very important rôle. If there is a meso-cecum and ascending meso-colon, the

cecum, being a comparatively heavy blind pouch supported against the abdominal wall in all the animals which do not stand erect, sags down into the pelvis, and the more it sags the more difficulty it has in emptying itself. Hausmann¹⁰ recognized three types: (1) due to a long common mesentery, (2) due to sliding or flaccid slack retrocecal tissue, and (3) due to long mesentery of the ascending colon and hepatic flexure. Case¹¹ and others, while not denying the presence of this condition, say it is not nearly so important as the fixed cecum. Connell¹² found it present in 11 out of 19 operative cases. It is probable that it may also be due to a dilatation and elongation of an originally normal organ by means of constricting bands involving the ascending colon, with resultant stasis. The general feeling among American surgeons seems to be that dilatation of the cecum is of far greater importance than its mobility. Cannon¹³ and others have proved that the cecum is a reservoir which is intended to hold its contents for a considerable time, and if we look to the lower animals we find that those vegetable feeders with enormous ceca have very much less constipation than the carnivora in whom it is rudimentary. That this is due to the type of diet undoubtedly is true, at least in part.

That excessively redundant ceca may cause no trouble was proven in one of my own cases two years ago. The patient, a woman, had an enormous left inguinal hernia. Even when she was lying down, the lower end of the sac was level with the upper edge of the patella. At operation, the cecum was found firmly adherent at the very bottom of the sac, and yet this patient had never been troubled greatly with constipation.

Our last anatomical consideration is the ileocecal valve. Case,¹⁴ Dodd,¹⁵ Baker¹⁶ and others have shown that it is frequently incompetent and that this incompetence is usually associated with stasis in the lower ileum, giving rise to a more or less well defined symptom complex. Case¹⁴ reports it to be present in 17% of all cases. This valve is of great importance in preventing the regurgitation of the cecal contents, which are very rich in bacteria, into the ileum, where bacteria are much less numerous. Naturally this results in putrefaction taking place in an organ which is not suited to it, with resulting absorption of decomposition products. When we look into this matter we find that there is considerable unanimity of opinion as to the fact, but rather less so as to the cause. First on the list comes congenital deformity of the valve itself. This is probably not so common as dilatation of the valve with relative insufficiency due to dilatation of the cecum from obstruction of the colon (Case¹³). Third comes deformity of the valve from inflammatory conditions, such as adherent appendix, etc., and fourth, pulling on the ileum, withdrawing it from its partial invagination into the cecum and making it incompetent. Thus we have a definite deformity of the valve, usually secondary to some other pro-

cess, but which as a rule is not remedied by the removal of the original cause.

Absolute diagnosis of these varying conditions is difficult and varies somewhat with different authors. I shall not take it up in this paper more than to say that there is a fairly definite symptom complex associated with ileal stasis and that this is the dominating feature. Positive, differential diagnosis can be made only by means of the x-ray, and even that is not always certain.

TREATMENT.

Naturally we find that the treatment recommended by different authors is very variable, but it is possible to reconcile many of these variations when we recognize the underlying condition which each man is proposing to treat. It is absolutely necessary to remember that in this condition each case must be treated according to the findings, and that no hard and fast procedure can ever be successful in all cases. Even where the underlying cause is the same, the resulting pathological processes may be very variable and demand very different treatment. Many cases with quite severe deformities show little or nothing in the way of symptoms, while others, which have marked symptoms, at operation will show an almost normal abdomen.

I cannot hope to cover all the indications for the different operations proposed, but can simply discuss a few of the best known and those which seem to me the most efficient. Medical treatment is often successful in removing symptoms, temporarily at least. Baker¹⁶ advised cutting down the proteids and increasing the carbohydrates. At the same time, green vegetables and fats should be taken freely to increase the bulk and lubricate the stools. As a rule it is necessary to use agar agar and Russian oil and sometimes some form of laxative. The stools should be bulky and evacuation should be thrice daily for a time at least. Bastedo¹⁷ adds to this, as a very important point, the formation of a good habit of defecation. Whipple¹⁸ advocates the use of lactic acid bacilli either by mouth or in the form of enemas.

In the absence of signs or symptoms pointing to some definite lesion, such as Lane's kink, definite obstructing bands, appendicitis, etc., it is probably best to try out medical treatment thoroughly before resorting to operation. We should remember that these people probably have a rather increased tendency to adhesion formation and that any laparotomy, no matter how carefully done, is almost sure to be followed by some adhesions. This fact probably explains, in part at least, the unsatisfactory result in those cases which Price¹⁹ has so aptly termed surgical junk.

Lane may well be called the originator of surgical intervention in this condition. His work is so well known that it is not essential to go into its details here. The three operations for which

he is justly famous are: (1) reduction of Lane's kink, (2) ileo-sigmoidostomy, (3) colectomy. The first of these needs no discussion other than to say that it has been somewhat modified by different operators, notably Coffey,²⁰ who plicates the mesentery on the side away from the kink in order that it may not recur. Ileo-sigmoidostomy has been variously modified. Morris²¹ uses a sharp-bladed crushing clamp inserted through the anus by an assistant, and passed through the walls of sigmoid and ileum by the surgeon. This is left in place two to four days. If safe and efficient, it must indeed be a very rapid method. Montprofit²² sutures both proximal and distal ends of the cut ileum into the sigmoid, the idea being to give better drainage. Dr. Samuel J. Mixter, in a number of cases has sutured cecum to sigmoid or transverse colon to save the ileo-cecal valve, and more recently Eastman²³ has advocated anastomosis of the lowest point of the cecum to the top of the rectum by means of a large Murphy button. As we have seen, it is of great advantage to preserve the ileo-cecal valve; so I should say, if the technical difficulties of Eastman's operation are not too great, that it was the best, as it also completely drains the cecum, which is prone to fill with fecal matter after ileo-sigmoidostomy. This question of backing up in the cecum is very interesting and is due to antiperistaltic waves, which apparently normally occur in the ascending colon in order that the cecal contents may not advance too rapidly.

In regard to colectomy, there have been few changes in technic since Lane described the operation. Naturally any improvement in the technic of the short-circuiting operation can and should be carried out in the other. Lardennois²⁴ has added one point, namely, that the transverse colon is easily dissected away from the back of the omentum by following its line of fusion. In this way, the omentum and its complete blood supply are saved.

The other modifications of the Lane operation are along the line of conservation, in that only a portion of the large intestine is removed.

Reder²⁵ resects the ascending colon and cecum, and then after doing a lateral anastomosis, ileum to colon, brings the blind end of the ileum out through the abdominal wall, thus leaving a vent which heals within three or four weeks.

Kellogg²⁶ has suggested the formation of an artificial valve where the end-to-side anastomosis is done. Mayo believes colectomy to be seldom necessary, as do Connell,²⁷ Lardennois,²⁴ Sorrel and others. These writers favor the careful dissection of the constricting bands with plastic repair of denuded areas, and also at times fixation of the intestine to the abdominal wall.

Oppel²⁷ has gone into this matter of reversed peristalsis, particularly after anastomosis, carefully. His conclusions may be epitomized as follows: Never leave a blind pouch without a fistulous opening and if possible never give the fecal stream a chance to go round a loop and

back to the same place. Both of these will result in symptoms of stasis.

Fixation of cecum mobile is advised by Wilms, Hausmann,¹⁰ and Duval.²⁹ The latter splits the peritoneum over the tendon of the psoas parvus and sutures the longitudinal band of the cecum to it. If, as we suppose, dilatation of the cecum is of greater importance than cecum mobile, these operations are to be used only in a small number of cases.

Repair of the ileo-cecal valve by means of several sutures placed in the sero-muscular coats constricting the opening and causing a slight intussusception, has been advised by Kellogg²⁶ and his views are confirmed by Case.¹⁴ This would seem to be a rational procedure in all cases where the ileo-cecal valve was incompetent. Martin,³⁰ on the other hand, claims that stasis is sometimes due to sphincterismus, and that if this is the case the muscle should be cut, permitting the valve to become more or less incompetent. This at first sight does not appear as rational a surgical procedure, but no decision can be reached until more cases have been done by both methods. Most recent authors agree that restricting bands should be severed and the intestine restored as nearly as possible to its original form whenever this seems to give probability of relief, rather than to do a short-circuiting operation or a colectomy. Emphasis should also be laid on various points of technic, such as little handling, plastic repair of peritoneum wherever possible, complete hemostasis and the elimination of dry gauze from the abdomen. It is a question whether oil introduced at operation does any good. Some authors say it does harm.

It seems to me, on thinking over quite a large number of cases seen as assistant and a small series as operator, that adhesions involving the large intestine are far more prone to recur than those involving the small, and that the dividing of bands causing constriction and angulation, is more important than fixation, and that short circuiting operations and colectomies are of greatest value where there has been a marked hypertrophic process in the large intestine, associated with the adhesion formation.

CONCLUSIONS.

The most important thing in the treatment of these conditions is that each case is a law unto itself and must be judged and treated individually; that probably most of the procedures advocated will be of benefit if used in those cases to which they are adapted; that no single procedure will benefit all, and that there will always be a certain percentage which will be unimproved or even made worse by any operation.

Short-circuiting operations and colectomy may have very far-reaching ill effects in some cases and should be done only after careful thought.

Finally, there seems to be no class of surgery in which the surgeon can use well balanced surgical judgment and common sense to greater advantage.

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summary of the history, development and present-day knowledge of cystoscopy as we have seen. The last five chapters, which are devoted to urethroscopy, are equally well treated, and are most timely at this moment, when for the first time in this country the pathology and treatment of urethral conditions are receiving the attention their importance deserves. Paper, type and illustrations are all most excellent, and the publishers as well as the writers are to be congratulated for the good quality of their work.

Pyelography (Pyelo-Ureterography); A Study of the Normal and Pathologic Anatomy of the Renal Pelvis and Ureter. By WILLIAM F. BRAASCH, M.D., Mayo Clinic, Rochester, Minn. Octavo volume of 323 pages, containing 296 pyelograms. Philadelphia and London: W. B. Saunders Company. 1915.

Dr. Braasch's book is chiefly valuable for the large number and the excellent quality of its illustrations, which show the renal pelvis in its normal state, and in a great variety of abnormal and pathological conditions. The material comes from the Mayo Clinic at Rochester, Minnesota, and the pictures, although they are numerous, are still a careful selection from a great mass of work done during the last five years. The text of the book is written in a simple, pleasant fashion, which makes the reading of it easy and at the same time provides a large amount of information in a small number of words. It contains chapters on the history and technic of this comparatively new field of work, and also chapters devoted to a consideration of the normal and abnormal anatomy of the renal pelvis and its many pathological conditions. There is a very complete bibliography of the subject as well as a good index at the end of the book. The publisher's work is well done.

Book Reviews.

Cystoscopy and Urethroscopy for General Practitioners. By BRANSFORD LEWIS, B.S., F.A.C.S., Professor of Genito-Urinary Surgery, Medical Department of St. Louis University, St. Louis, Mo., Genito-Urinary Surgeon to St. John's Hospital, etc.; and ERNEST G. MARK, A.B., M.D., F.A.C.S., Professor of Genito-Urinary and Venereal Diseases in the University Medical College, Kansas City, Missouri, etc.; with a chapter by WILLIAM F. BRAASCH, M.D., Attending Physician to the Mayo Clinic, Rochester, Minnesota. With 113 illustrations, 23 of which are printed in colors. Philadelphia: P. Blakiston's Son and Company, 1012 Walnut Street. 1915.

This book is of real value to those interested in the subject matter it contains. It devotes its first seven chapters to as complete and satisfactory a

General Medicine. Edited by FRANK BILLINGS, M.S., M.D., and J. H. SALISBURY, A.M., M.D. Series 1915. Chicago: The Year Book Publishers. 1915.

This is the first volume in the practical medicine series of the current year on the past year's progress in medicine and surgery. It consists of a series of chapters on infectious diseases and diseases of the lungs, heart, arteries, blood and hematopoietic organs, ductless glands and kidneys, and metabolic diseases. Each chapter presents the details of the most important advances made in its domain during the past season. The work is illustrated with twenty-four figures in the text and eight special plates and constitutes an excellent epitome of recent progress in general medicine.

An Introduction to the Study of Color Vision.

By J. HERBERT PARSONS, D.Sc., F.R.C.S., Ophthalmic Surgeon, University College Hospital.
New York: G. P. Putnam's Sons. 1915.

This is a book on color vision long needed. Most of the vast literature on the subject has been written to advance some theory; facts have been twisted and objections minimized to favor some authors' views.

This work gives a practical summing up of what we know about color vision and its anomalies without prejudice, and a clear and fair discussion of the leading theories of color blindness. So fairly is this done that one cannot gather what theory Mr. Parsons inclines to. Nor is the book a collection of quotations; it is a lucid and detailed exposition of a complicated subject amply illustrated.

This work is divided into three parts: (1) Chief facts of normal color vision; (2) Chief facts of color blindness; (3) Chief theories of color vision.

A Text-Book of Medical Chemistry and Toxicology.

By JAMES W. HOLLAND, M.D., Emeritus Professor of Medical Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Fourth Edition, Thoroughly Revised. Philadelphia and London: W. B. Saunders Company. 1915.

The new fourth edition of Holland's work maintains the excellence of typography and illustrations to which we have been accustomed in previous editions. An effort has been made to cover the entire subject of chemistry as it applies to medicine and many of the newer tests have been incorporated, thus bringing the work up to date.

It may be seriously questioned, however, whether such a work fulfils the present needs of the medical student when practically all schools are introducing a premedical year where chemistry is taught more as a science than an appendage to medicine. The short introduction to physics which the author's book also contains is rendered useless by the vastly better instruction which the student obtains in that subject in the preliminary training, now demanded by medical schools for entrance. In other words, such medical chemistries, as they are called, are a relic of the past and have outlived their usefulness. At present physiological, organic chemistry and toxicology are independent subjects which can not be well grouped in one work without doing injustice to one or more of them.

Still as long as all medical schools have not adopted the new requirements, such a table d'hôte course as is offered by books of this class

will be needed and one must confess, in all honesty, that this work is one of the best published. The color reactions are portrayed with unusual vividness and accuracy and the description of reactions are lucid and clear cut. There is an excellent index and as a book of reference much as we use an encyclopaedia for a brief and rapid refreshing of our knowledge of a subject within its scope, the work has a merited place in our libraries.

A Manual of Physiology.

By G. N. STEWART.
Seventh edition, 1132 pages, 467 figures. New York: William Wood & Co. 1915.

The seventh edition of this excellent manual retains the features which have made earlier editions valuable. Chief among these may be mentioned the exceptionally readable manner in which fundamental experiments are described. The author has been remarkably successful in his discussion of the evidence on which his conclusions are based. The advanced student of physiology, who does not wish to take the time to consult original sources, will find the most significant data in almost any of the important fields of physiology, clearly presented. The new edition differs from previous editions mainly in its chemical aspects. Chemical physiology is advancing very rapidly at the present time and no textbook of physiology can hope to be entirely satisfactory in its chemical material unless subject to frequent revision. The new work along these lines seems to be as fully treated in this manual as in any of its contemporaries. From the standpoint of construction the book is quite satisfactory. Typographical errors and mistakes in indexing, which are often so annoying, are noteworthy by their absence. The figures are excellently selected and well printed.

Evolution and Disease.

By J. T. C. NASH, M.D., (Edin.) New York: William Wood & Co. 1915.

This monograph is based on the author's three Chadwick lectures on "The Evolution of Epidemics," delivered in April, 1913. In the present volume the subject material of these lectures is expanded into a series of sixteen chapters tracing successively the steps in the history of disease and its relation to the evolution of civilization from the times of medieval famine and pestilence through the development of bacteriology and sanitation to the present phenomena of war and military medicine in their bearing on the future welfare of mankind. The book closes with a valuable alphabetic bibliography of references. It is an interesting and useful contribution to the philosophy of evolution in the relation of disease and its control to human progress.

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GOLDSMITH AS A PHYSICIAN.

AMONG the famous men of letters whom the medical profession has, with varying degrees of justice, been proud to claim as its members, few, perhaps, have a more charming individual personality, greater genius in writing, and less claim to the distinction of being a physician than Oliver Goldsmith. It has been customary to speak casually of Goldsmith as a doctor, yet the evidence of his medical studies and practice has hitherto hardly seemed to justify his inclusion under that denomination. Indeed, in 1896, Dr. John Morris of Baltimore published in the *Journal of the American Medical Association* (Vol. xxvi, pp. 953-57) a discussion of the question "Was Goldsmith a Physician?" and concludes that "after very faithful research, with an honest hope that I could discover proofs of his having obtained a medical degree, I am constrained to declare that his education did not

fit him for a professional life, or that any university, under the most lax conditions, could have granted him a degree."

Recently, however, at a meeting of the historical section of the Royal Society of Medicine, Sir Ernest Clarke presented in a paper the result of his extensive and painstaking investigations into a multitude of original manuscript sources, as a result of which he seems conclusively to have refuted Dr. Morris's conclusion. It seems definitely disproved that Goldsmith obtained his medical degree at Padua, at Leyden, at Edinburgh or at Louvain. Dr. Clarke has, however, found irrefutable evidence that he did receive such a degree from Trinity College, Dublin, and this evidence he presents in conjunction with a brief sketch of Goldsmith's career.

Oliver Goldsmith was born in Dublin on November 10, 1728, was admitted to Trinity College on June 11, 1745, and received the degree of bachelor of arts on February 27, 1749. Immediately after this he read for orders for a short time and then served for a year as tutor in a gentleman's family of the neighborhood. It then appears that he was desired by his uncle to undertake the study of physic, and to this end he went to Edinburgh, probably in 1752. Several of his letters are preserved from the period of his residence at Edinburgh, and in these he speaks from time to time of his medical studies and teachers, particularly of Mr. Munro, professor of anatomy, "the only great man among them; so that I intend hearing him another winter, and go then to hear Albinus, the great professor at Leyden." The name of Oliver Goldsmith appears twice in the still extant class lists of Professor Alexander Munro, Senior, as having entered the class of anatomy in October, 1752, and again in October, 1753, paying each time a fee of three pounds, three shillings.

As a matter of fact, Goldsmith finally did go to Leyden, and elsewhere on the Continent. In a letter to his uncle, in January, 1754, he says: "After having spent two winters in Edinburgh, I now prepare to go to France the 10th of February; I have seen all that this country can exhibit in the medical way. . . The circle of science, which I have run through before I undertook the study of Physic, is not only useful, but absolutely necessary to the making of a skilful physician. . . I shall spend this spring and summer in Paris, and at the beginning of next winter go to Leyden. The great Albinus is still alive there, and 'twill be proper to go, though

only to have it said we have studied in so famous an University."

After his visit to Leyden came the fascinating chapter of Goldsmith's wanderings, afoot, through France, Switzerland and Italy, and ultimately his return to England in 1756. He reached London in February of that year, in a state of utter destitution, and succeeded, at first with difficulty, in earning a livelihood as assistant to a chemist on Fish Street Hill, near the London monument. Later, through the patronage and friendship of a Dr. Sleigh, he set up in medical practice in Southwark, where he seems to have lived a hand-to-mouth existence under very shabby and precarious circumstances. The *Lancet*, in its issue of March 7, 1914, presents the following sketch of Goldsmith during this period of his career:—

"Reynolds once told an anecdote of the care with which Goldsmith at this time carried his hat so as to hide a patch in his coat. He tried all kinds of other employments, from that of usher to that of printer's reader, but returned as a *pis aller* to the medical profession, for which he had so little gift and for which he was at this time not 'qualified', as the word is now understood. In December, 1757, he writes to his brother-in-law Hodson that he was making shift to live by a 'very little practice as a physician, and a very little reputation as a poet.' In August, 1758, he wrote three letters to friends in Ireland, begging them to get him subscribers for his forthcoming book, 'On the Present State of Taste and Literature in Europe.' The MS. of one of these letters was reproduced in 1858 by the modern representative of Griffin, Goldsmith's original publisher. It probably has often been torn from the collected edition of Goldsmith printed by Griffin in 1858, and has deceived the unwary collector of autographs. In this letter, which is addressed at great length to Mrs. Lawler, *née* Contarine, the cousin with whom poor 'Goldie' had been in love in Ireland, he gives an account of his penury, none the less poignant for its tone of persiflage. He intends, he says, to adorn his room with 'maxims of frugality.' 'These,' he continues, 'will make pretty furniture enough and won't be a bit too expensive, for I shall draw them all out with my own hands, and my landlady's daughter shall frame them with the parings of my black waistcoat. Each maxim is to be inscribed on a sheet of clean paper and wrote with my best pen, of which the following will serve as a specimen: "Look sharp. Mind the mean (*sic*) chance. Money is money now. If you have a thousand pound, you can put your hands by your sides and say you are worth a thousand pounds every day of the year. Take a farthing from an hundred pound, and it will be a hundred pound no longer." Thus which way soever I turn my eyes they are sure

to meet one of those friendly monitors, and as we are told of an actor who hung his room round with looking-glasses to correct the defects of his person, my apartment shall be furnished in a peculiar manner to correct the errors of my mind.' The sale of his book was to pay for his passage to Coromandel, where, through his friend Milner, he had obtained the position of physician and surgeon to a factory. His practice was to bring him in £1000 per annum, but evidently he was expected to qualify first. He must have been familiar with Smollet's description of an examination at Surgeon's Hall in 'Roderick Random,' but undeterred by this he presented himself before the examiners and was disqualified. The examiners were probably Messrs. Mark Hawkins, Fullagar, Nourse, Girle, Singleton and Roul. The entry in the Royal College of Surgeons 'Examination Book,' under date Dec. 21st, 1758, states that before a Court of Examiners, held at the theatre, James Johnson was 'appointed apprentice to Mr. Carson, Thomas Meggs qualified for surgeon to a regiment, James Bernard Mate to an hospital, Oliver Goldsmith, found not qualified for Do.'"

With this failure before the Royal College of Surgeons Goldsmith's medical career in London came to an end and the Coromandel venture failed also to materialize. Goldsmith's movements during the ensuing years are, to a great degree, uncertain, but in the diary of Bishop Percy (editor of the *Reliques*) are memoranda of his meeting Johnson and Goldsmith at Oxford in February, 1769, and under the date, February 18, "On this occasion Dr. Goldsmith was admitted as *eundem gradum*, which he said was M.B." From this it would appear that Goldsmith actually received a medical degree from Oxford and that he had previously received one from some other medical college. With the assistance of Sir William Osler, Dr. Clarke now proceeded to search the files of the local newspapers and was rewarded by finding at last, in the issue of Jackson's *Oxford Journal* for Saturday, February 18, 1769, the following conclusive item:—

"Yesterday Oliver Goldsmith, Esqr., Bachelor of Physick in the University of Dublin, author of *The Traveller a Poem*, of the *Present State of Polite Learning in Europe*, and of several other learned and ingenious performances, was admitted in Congregation to the same Degree in this University."

It appears certain, therefore, that Goldsmith must have received his medical degree in Dublin at some time between 1756 and 1763, probably in 1761, since shortly after this date appears his first signature in an agreement with

his publisher as Oliver Goldsmith, M.B. The *ad eundem* degree granted him at Oxford was doubtless given rather for his distinction in letters than in medicine.

In the discussion of Sir Ernest Clarke's paper Mr. D'Arcy Power presented the following clinical data with reference to the cause of Dr. Goldsmith's death: "Goldsmith had long been troubled with symptoms of renal disease, and as early as 1770 to 1771 he had spent some time at Bath, probably for the cure of a 'gouty kidney.' In 1773 he was suffering again from dysuria, but he improved under treatment, and in March, 1774, he went to a farmhouse at Hyde, near Handon. Here he was taken ill on March 25, becoming feverish and having a fresh attack of dysuria. He seemed so weak and his pulse was so bad that his apothecary became frightened and sent for further advice. A little improvement took place, but the patient persisted in dosing himself with James's powder—a preparation of antimony which he had himself recommended in 'Little Goody Two Shoes.' At midnight on Sunday, April 3, he was in a sound and calm sleep, but his condition clearly caused anxiety, because 'the gentleman who attended him' was on the alert, and at 4 p.m. he was found to be in strong convulsions, which continued without intermission until his death at 4.45 a.m. on April 4, 1774. The report of the case has been submitted to Dr. Philip Hamill, the medical pathologist at St. Bartholomew's Hospital, who replied that the symptoms strongly suggested a bacillus coli septicemia from an old pyelitis, complicated by excess of antimony in the James's powder. From our knowledge of Goldsmith's manner of life, however, it would seem more likely that his terminal condition was one of uremia.

Goldsmith is buried near the old round church of the middle temple in London, and it has recently been proposed to set up near by a replica of the statue of him which stands with that of Edmund Burke at the gateway of Trinity College, Dublin. The final discovery, after this admirable piece of research in medical history, that Goldsmith's medical degree was genuinely obtained from his *alma mater*, should stimulate interest in this project among physicians of all English speaking countries, since the renown which he attained in the field of letters may now justly be held to extend some of its distinction to the medical profession, of which Goldsmith was truly a member.

PROPORTION OF MENTAL DEFECTIVES AMONG DELINQUENTS.

WE have been hearing very much in recent years of the relationship of mental defectiveness to delinquency. Some enthusiasts in this work have been making sweeping and positive statements concerning the very great frequency of mental defectiveness among delinquents. In fact, from some quarters the impression has been spread broadcast that most delinquents about the age of puberty and adolescence are feeble-minded more or less. Those who have not directly dealt with these delinquents, however, have suggested that these statements were exaggerated. No reliable studies seemed to be forthcoming concerning the real proportion of mental defectives among delinquents. Recently, however, a careful study of the proportion of mental defectives among delinquents has been made by a careful worker in this field.

Augusta F. Bronner of the Psychopathic Institute of the Juvenile Court of Chicago, presents such a report as a result of special research work with this single object in view (*Journal of American Institute of Criminal Law and Criminology*, November, 1914). Most of the studies that have appeared up to date cannot be accepted as giving accurate or reliable information. The percentage of feeble-minded among offenders has been ranged so high (even as high as 89%) because some of the following factors have been neglected: Only the caught offender has been considered in most cases. The majority of the data have been based upon the study of those institutions (reformatories and state industrial schools). Those who were not caught and those who were paroled were not considered. Thus the figures for such a highly selected group of offenders are no criterion for offenders in general. Furthermore, the fact has been lost sight of that examination of adolescents and adults by the Binet-Simon tests alone is unsatisfactory for several reasons. These tests are unreliable for the ages above ten years; the coöperation of the examiner must be obtained and this is by no means always easy; the attitude of the examiner may not be such as to gain the confidence of the subject, especially if the examiner himself is much hurried; the examinee's reactions may be considerably influenced by his emotional condition, particularly if he knows that he is to appear shortly before the judge. Furthermore, when it comes to court work, such important factors as defective vision,

defective hearing, mental dulness from physical illness and the pernicious effects of bad habits are likely to be overlooked. In addition, the language factor is a very important one, since the individual may be unable to understand the test or to explain himself properly.

Miss Bronner's research was carried on at the Psychopathic Institute of the Juvenile Court of Cook County, where she probably had to deal with a much less selected group of offenders than can be found elsewhere, her group consisting of first offenders as well as recidivists, and those brought to court on complaint of parents in addition to those caught in delinquency. For the purposes of her research she examined 505 cases of delinquent boys and girls in the Detention Home. She made certain that these children were not to appear in court on the day of the examination, and that they did not know that the examination had any reference to their trials. She took the further precaution to see to it that all the tests were made by the same individual, and in every case allowed sufficient time for the establishment of a feeling of friendliness before the tests were started.

In order that a boy or girl should be classed as normal, he or she had to be so regarded by the physician, the probation officer and the teacher, the child must have reached at least the sixth grade, there must have been no retardation, and the individual had to be able to do fairly advanced school work. These requirements were demanded in order that chances of error could be excluded. Furthermore, in doubtful cases, the Binet tests were employed. In cases where language proved to be a great factor, other tests not involving language were supplemented. In this way the investigation was scientific and the child was being given a square deal. As a result of these tests, the percentage of feeble-minded was found to be less than ten, while the group of those normal in ability was found to exceed ninety per cent.

WORK OF THE MASSACHUSETTS ANTI-TUBERCULOSIS LEAGUE.

As the principal publication in this week's issue of the JOURNAL we are pleased to present the proceedings and principal papers of the first annual meeting and conference of the Massachusetts Anti-Tuberculosis League held in this city on Thursday, April 1, 1915. This new organization is intended to coördinate the work of

local anti-tuberculosis societies throughout the state, and by its annual meeting to encourage the report of investigation and progress and the dissemination of knowledge of methods in dealing with tuberculosis in the community.

Among the original papers presented, especial attention should be called to those of Dr. Allan J. McLaughlin, Dr. John B. Hawes, and Dr. Walter G. Phippen on the situation in regard to the new local tuberculosis hospitals and dispensaries. At the time these papers were presented a large number of the communities coming under the provisions of the act of 1911 had failed to take steps to establish such institutions as required by this law. Since that time, however, as has been noted in current issues of the JOURNAL, various of these cities and towns have undertaken compliance with the regulation and it is expected that by September 1, all will have done so.

Mr. Arthur Drinkwater, the treasurer of the Association, reported a balance of \$1,277.56 in its finances, chiefly derived from the sale of Red Cross Christmas seals. Owing to the generosity of the Boston Society for the Relief and Control of Tuberculosis, the expenses of the Massachusetts Anti-Tuberculosis League for this year have been comparatively light. Mr. Drinkwater pointed out that the League, if adequately financed, can be of great service to the state and to local anti-tuberculosis associations; but that individual support will be necessary if the opportunities for service afforded by the League are to be adequately employed. The following officers of the association were elected for the ensuing year:—

President, Vincent Y. Bowditch, M.D., Boston; vice-presidents, Walter P. Bowers, M.D., Clinton; James C. Coffey, Worcester; Rev. William B. Geoghegan, New Bedford; John H. Gifford, M.D., Fall River; Mrs. Joshua Hale, Newburyport; Miss Louise P. Loring, Beverly; Allan J. McLaughlin, M.D., Boston; George L. Schadt, M.D., Springfield; secretary, Seymour H. Stone, 4 Joy Street, Boston; treasurer, Arthur Drinkwater, Cambridge; executive committee, Roger I. Lee, M.D., Boston, chairman.

The secretary of the League, Mr. Seymour H. Stone, reported that the League now represents thirty-four anti-tuberculosis associations throughout the state. The important future possibilities of the work of this organization are hardly to be over-estimated, and it is a pleasure to record in the JOURNAL this first earnest of its purposes and aims of service.

THE CONQUEST OF TYPHUS IN SERBIA.

THE JOURNAL has the unique and valuable privilege of publishing, in another column of this week's issue, a series of extracts from private letters of Dr. Richard P. Strong, written during the period of his service in Serbia in charge of the sanitary commission for the eradication of typhus fever. These extracts are chronologically arranged and present in the form of a diary letter an intimate and first hand personal record of Dr. Strong's work. In a recent issue of one of the Boston daily papers there appeared similar extracts from a diary kept by Dr. Strong, which presented, however, other aspects of the work from those shown in these letters. Referring in this diary to a trip of inspection Dr. Strong writes as follows of his experience in traveling by handcar from Ferrosoviez to Uskub:—

"We started at 4 a.m., but after we had been running an hour one of the iron thwarts in the wooden handlebar of the handcar suddenly broke. Happily we were running down hill and the car kept on going until we reached the next station. Here we found a blacksmith and within an hour he had welded the broken parts together."

After his return to Nish from this tour of inspection he writes also as follows in the diary with reference to his methods of disinfection:—

"I am glad to say that my transportable disinfecting and bathing plants have just been finished and will be sent to Uskub tomorrow for use. Such a plant consists of a car which contains a boiler for generating steam; a second car, formerly a refrigerating car, which is practically a huge autoclave, and into which the steam is turned for the disinfection of clothes, and a third car in which there are 15 shower baths."

"The individuals are to have their hair clipped, be bathed and their clothes disinfected by steam while they are bathing. Their clothes will be ready after the bath. Before they clothe themselves they are sprayed with petroleum. Several thousand persons can be bathed and disinfected in a day by this means and the cars can be moved from city to city. I used to utilize cars with steam disinfection in Manchuria."

The work done by Dr. Strong and his associates, in the prompt control and eradication of typhus fever in Serbia, is thus far the greatest medical service of the present war and is comparable with the work of Reed on yellow fever in Cuba, of Gorgas in Panama, and of Dr. Strong himself on pneumonic plague in Manchuria. By his achievement, not only was relief brought to a nation menaced by a terrible

epidemic scourge, but the extension of that epidemic to other countries and peoples, with its consequent incalculable potentialities of suffering and loss of life, was prevented, a triumph of medical science in time of war.

EYE INJURIES IN WARFARE.

SOME of the most distressing wounds which have been reported from the European arena of war are those of the orbit. Not only are these peculiarly painful when inflicted, but they result usually in a much more serious disability than the average wound. It seems that those received by bullets which are wholly or partly "spent" prove to be more serious than those where the initial velocity of the projectile has not been modified. The most serious ocular injuries of all are those received as a result of enflaming fire, where both orbits are pierced transversely. Eyelid injuries are also common, and in these the lids usually become so edematous that sutures cannot be applied.

Sympathetic ophthalmitis has practically been abolished as a result probably of the early diagnosis and treatment of injured eyes, the application of the principles of asepsis and the prompt enucleation of ruptured globes. Students of medical history will recall that this affection was extremely prevalent during our Civil War, occurring in about 16% of all eye injuries.

The penetration of the eyeball by small foreign bodies is a very common occurrence and often gives more trouble in treatment than what are apparently more serious injuries. The body is usually a fragment of the steel or cupronickel coat of a bullet, although it often happens that dirt and gravel are driven through the choroid by the explosion of a shell. There are two main difficulties in the treatment of such cases. First the intruder must be located, and this is sometimes almost impossible to do definitely, even though two or three skiagraphs are taken, the foreign body being too small to cast an appreciable x-ray shadow. Even after the particle is located it may not be feasible to remove it intact, owing to its friability, and sometimes when it is removed there is found to remain another foreign body whose existence had not been suspected. Many such fragments, too, are non-magnetic and hence cannot be removed by the electromagnet.

MEDICAL NOTES.

AMENDMENT OF THE HARRISON LAW.—Report from Washington, D. C., states that on July 30 the federal regulations under the Harrison narcotic law were so changed as to permit the registration of osteopathic practitioners to administer narcotic drugs in those states in which they are admitted to register as physicians.

DECLINE IN PRICE OF RADIUM.—In another column of this issue of the JOURNAL we note a further recent advance in the cost of various drugs and their preparations. Strangely enough, advice from London on July 20 states that the price of radium has declined during the past year about \$1000 a gram, apparently, because the war has forced some holders of limited quantities to sell at a loss. Meantime in America the experimental station of the United States Bureau of Mines in California has succeeded in producing radium from carnotite ores at a cost of only \$36,000 a gram, a rate greatly lower than that of the European products which have ranged in price from \$120,000 to \$160,000 a gram.

FEEBLE-MINDEDNESS IN OHIO AND INDIANA.—The recently published eleventh bulletin of the Massachusetts State Board of Insanity for July, 1915, calls attention as follows to the status of feeble-mindedness in Ohio and Indiana: "In a publication of the Ohio Board of Administration, under date of March, 1915, the feeble-minded problem in Ohio is discussed. Ohio estimates 10,000 to 15,000 feeble-minded in that state, with the state taking care of only 2000 in institutions, or less than 20%, although some of the others are in reformatories and other institutions. The mental examination of delinquents in the Girls' and Boys' Industrial School and Home reveals startling results. Of 100 girls examined, 59 were feeble-minded, 14 borderline cases, 13 mentally retarded, and only 14 of normal mentality. Investigations among adults have shown that over 50% of prostitutes, 25% of reformatory and penitentiary inmates, and probably 75% of infirmary inmates are feeble-minded.

"The Indiana State School for feeble-minded Fort Wayne, is filled to its capacity and has on the waiting list more than 50 who cannot be accommodated. Dr. George S. Bliss, Fort Wayne, the superintendent, recommends that the state purchase a new farm of one or two thousand acres, to be used in conjunction with the one at present in use. The new farm is needed especially for adult females."

PREVALENCE OF MENINGITIS, POLIOMYELITIS, SMALLPOX AND TYPHOID FEVER.—The weekly report of the United States Public Health Service for July 23, 1915, notes that during the month of June in that year eight cases of cerebrospinal meningitis were reported in Wisconsin

and five in Maryland. During the same month there were three cases of poliomyelitis in Maryland and fifty-six of smallpox in Wisconsin. There were ninety-four cases of typhoid fever in Maryland, sixty-two in New Jersey and forty-three in Wisconsin.

SMALLPOX VACCINE AND TETANUS.—Dr. John F. Anderson, in a recent issue of the *Bulletin of the United States Public Health Service*, records his experiments to disprove the validity of the often quoted statement that inoculation for smallpox may ultimately result in tetanus. An experiment of charging smallpox vaccine with tetanus spores and inoculation with it of monkeys and guinea-pigs failed to elicit any case of tetanus. In turning to statistics Dr. Anderson found that during the given period the manufacturers had sold for use about 40,000,000 individual doses, of which 32,000,000 were not returned, presumably having been used. Inasmuch as the number of authentic cases of tetanus following inoculation for smallpox was 41, it would show that about one in a million of the persons vaccinated developed tetanus. In the army and navy, during the nine years ending with 1913 there were vaccinated 360,000 soldiers and 225,000 sailors, with corresponding figures of tetanus infection of six and two. The two cases occurring in the navy were found to follow, one a railroad injury and the other a wound. Dr. Anderson's conclusion, therefore, is that tetanus occurring fifteen to twenty days after vaccination does not take its infection from the virus, and there can be no demonstrable connection between smallpox vaccine and tetanus. That the vaccination would may be the point of entry of the tetanus germ is not disputed, but the possibility of keeping the wound clean is obvious.

EYE, EAR, NOSE AND THROAT HOSPITAL, NEW ORLEANS, LA.—The Eye, Ear, Nose and Throat Hospital of New Orleans, La., which treats only those too poor to pay for medical advice, states in a recently issued report, that during the year 1914 it received 8136 patients, 3333 in the eye department, 4750 in the ear, nose and throat department and 53 dermatological cases; 1838 operations were performed. A total of 4,796,000 units of diphtheria antitoxin were dispensed to 638 patients, which was an increase of more than 1,000,000 units over the year 1913.

EUROPEAN WAR NOTES.

SERBIAN SANITARY COMMISSION.—It is announced that Dr. Harry Plotz and Dr. George G. Bohrer, of the Mt. Sinai Hospital, New York, recently sailed from that city aboard the Greek steamer *Themistocles* to join Dr. Richard P. Strong at Nish, taking with them a complete bacteriologic outfit for use of the Serbian sanitary commission.

WITHDRAWAL OF AMERICAN RED CROSS UNITS.

—In last week's issue of the JOURNAL we published a statement announcing the intended withdrawal of American Red Cross units from Europe on Oct. 1. The following further statement recently issued by Miss Louisa P. Loring, Red Cross emergency secretary for Massachusetts, indicates, however, that Red Cross relief work in Europe will not be wholly suspended:—

"Since the report was printed that the Red Cross was to withdraw its personnel from Europe by Oct. 1, there apparently has been a misunderstanding on the part of some persons who take it for granted that the Red Cross work for Europe would then be finished. On the contrary, the Red Cross will continue to send supplies, but the units of surgeons and nurses are to be withdrawn, as the following letter received from Miss Boardman clearly explains:—

'Dear Miss Loring—After a year's service in Europe the American Red Cross has considered it advisable to withdraw our personnel with the exception of those in Belgium, who have been there only about six months. On Oct. 1 we should have to change many of our surgeons and nurses, if not all of them, as their tours of duty would be up. To bring those we have in Europe home and to send out substitutes would cost a total of perhaps \$70,000, and then we should not be able, with our present funds, to maintain these units in Europe but two or three months longer than Oct. 1. For this reason it has seemed advisable to utilize what money we have left in sending the necessary supplies to Europe and in aiding the Red Cross societies there by contributions of funds. We have notified the governments long in advance, to give them ample time to take over the hospitals which our personnel have occupied. Yours, etc.,

'Mabel T. Boardman, Acting Chairman.'

"Much as it regrets this necessity, the society realizes that no Red Cross of a neutral country ever before rendered so long and extensive service in the way of personnel to nations engaged in war.

"The sanitary work in Serbia will continue."

ANNUAL REPORT OF AMERICAN RED CROSS.—

On July 29 the American Red Cross published in New York an annual report dealing with the first year of its war activities in Europe:—

"Since hostilities began, the American Red Cross has spent \$1,460,306 for relief of suffering due to the war, leaving on hand a balance of \$174,818. Never in history has a Red Cross organization rendered so great a service to the peoples of other countries. Every country engaged in the war is represented in the expenditure of the great fund.

The personnel now in Europe totals 71 surgeons and 253 nurses, and of these all but about four surgeons and twenty-four nurses will be recalled not later than Oct. 1 next.

The financial statement covering the year's work is as follows:—

RECEIPTS.	
Contributions	\$1,560,124
Special for Serbian Agricultural Relief Committee	10,000
Special for the Rockefeller Foundation for the Sanitary Commission	65,000
Total	\$1,635,124
(The Rockefeller Foundation also contributed \$20,000 additional directly to the Commission in Serbia.)	
EXPENDITURES.	
Cash remitted	\$423,882
Designated contributions	\$217,182
Undesignated contributions	206,700
Salaries of surgeons and nurses	216,018
Travel and maintenance of personnel: transportation of supplies on land and sea, including freight, drayage, expressage, lighterage, pilotage, etc.	148,472
War insurance	10,138
Equipments and outfits	36,298
Supplies purchased	354,630
Appropriated for pensions for the widows of two American Red Cross doctors who died of typhus while on duty in Serbia	15,000
Miscellaneous	2,375
Sanitary Commission—Appropriated for transportation, equipment, supplies, salaries and maintenance	105,000
Designated contributions to be remitted	8,493
Salaries and maintenance for three months additional and return of personnel (estimated)	140,000
	1,460,306
Balance	\$ 174,818

The report also includes an itemized list of all the articles shipped to Europe by the American Red Cross, a list in which are hundreds of articles having to do with medicine, surgery, sanitation, and other phases of Red Cross work.

Bandages	1,906,000
Antiseptic tablets	1,150,000
Cotton, pounds	892,670
Hospital garments	211,688
Surgical dressings and pads	1,106,516
Sulphur, pounds	358,983
Clothing for refugees (garments)	209,903
Gauze, yards	1,062,281
Anesthetics, pounds	31,191
Adhesive plaster, rolls	11,345
Handkerchiefs	22,412
Pillows	22,400
Blankets	18,876
Antitoxin, cases	71
Alcohol, gallons	1,064
Cholera vaccine, doses	12,200
Hospital linen, articles	49,548
Mufflers	29,341
Smallpox vaccines, tubes	10,000
Soda, pounds	20,000
Silings	19,810
Crimoline, yards	67,415

The list includes, it is stated, supplies purchased and donated, designated as well as undesignated, but does not include supplies still waiting shipment to the warehouses of the Red Cross."

CONDUCT OF BRITISH ARMY MEDICAL SERVICE.

—In a dispatch dated June 15, and published in the *London Gazette* on July 10, Sir John French commented in the following terms of commendation on the conduct of the British Army Medical Service at the front:—

"I have much pleasure in again expressing my warm appreciation of the admirable manner in which all branches of the Medical Services now in the field, under the direction of Surgeon-General Sir Arthur Sloggett, have met and dealt with the many difficult situations resulting from the operations during the last two months.

"The medical units at the front were frequently exposed to the enemy's fire, and many casualties occurred amongst the officers of the regimental medical service. At all times the officers, non-commissioned officers and men, and nurses carried out their duties with fearless bravery and great devotion to the welfare of the sick and wounded.

"The evacuation of casualties from the front to the base and to England was expeditiously accomplished by the administrative medical staffs at the front and on the lines of communication. All ranks employed in units of evacuation and in base hospitals have shown the highest skill and untiring zeal and energy in alleviating the condition of those who passed through their hands.

"The whole organization of the Medical Services reflects the highest credit on all concerned."

HIGH DEATH RATE AMONG BRITISH WOUNDED.

—In the issue of the *Lancet* for July 17 the following comment is made on the relatively high death rate prevailing among British wounded in the war:—

"The fact, related in Parliament by Mr. Asquith, that the proportion of deaths among our wounded amounts to nearly 24% has naturally caused a painful impression. We have already pointed out that the percentage of deaths during the Crimean War was only 22, and this in spite of the appalling insanitary conditions which then prevailed. This proportion was reduced to 20% during the Boer War, but 44 years ago, during the Franco-Prussian War, the Germans lost only 17.53% of their wounded. The introduction of aseptic and antiseptic surgery and the great progress generally accomplished since then, made it only reasonable to expect an even greater saving of human life.

"But in spite of the figures quoted by Mr. Asquith in the House, the anticipated improvement has taken place; given conditions similar to those that prevailed in 1870-71, we may confidently say that the percentage of deaths is less now than then. But conditions generally are utterly different today. The trench fighting results in a much larger number of injuries due to shells and shrapnel. Wounds from rifle bul-

lets are comparatively rare, and when they do occur the body is so sheltered by the trenches that it is generally the head which is hit, and the probability of fatal results is consequently much greater. But by far the most terrible feature of the present war is the fact that in so many cases it is absolutely impossible to bring timely help to the wounded. The trenches face each other at very short distances. An attack is delivered, and the mass of the wounded fall on the unsheltered space between the trenches. When the struggle is over this space is carefully watched, and the slightest movement brings a volley from rifles or machine-guns. At night only, when favored by darkness, some of the wounded may be able to crawl back to their trenches. It is the cruel fact that aid reaches the wounded very late, if at all, that accounts chiefly for the high death-rate. It has been suggested that women dressed in some very conspicuous manner might be employed for this purpose, for there would be no possibility of mistaking their pacific purpose. If we could once more fight in the open, where the entire body, instead of merely the head, would be exposed; if the rifle bullet resumed its ascendancy; and if, further, it was possible to relieve all the wounded as soon as the battle was over, we should then doubtless find that the percentage of recoveries among the wounded was in keeping with what we are entitled to expect from the advance in surgical science.

"Especially will this be the case if operations can be performed and absolute rest and full treatment be given for a sufficient length of time close to the battlefield in cases of abdominal and other wounds that are dangerously aggravated by traveling. This, we understand, is now actually done, though perhaps, there is room for some improvement in the shape of more extensive accommodation near the front.

"A greater number of portable tent hospitals will be required, particularly when the armies begin to move. Railway head lines for ambulance trains may not be so conveniently near as at present. Certainly there is an extensive network of railways in the countries over which the armies now in Flanders are likely to move. But the army that retreats will naturally destroy the rails and blow up the bridges whenever possible, and there may even be a scarcity of houses remaining that might serve as temporary hospitals. Battles will probably be fought long before the lines of communication can be repaired. The present facilities for promptly disposing of the wounded by sending them to the base hospitals cannot always be maintained.

"It will not go on forever, and now is the time to prepare for the very different conditions that will prevail when we are once again able to carry out rapid movements. Tent hospitals that can be dismantled, packed in carts or railway trucks, conveyed in any direction and put up again in a few hours are likely to be especially useful."

BOSTON AND NEW ENGLAND.

NEW ENGLAND ALUMNI ASSOCIATION OF THE GRADUATES OF JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA.—The tenth annual meeting of the New England Association of the Alumni of the Jefferson Medical College of Philadelphia was held at Rocky Point, Rhode Island, July 28. Nearly 100 members were present. An elaborate banquet, arranged by the Rhode Island delegation, was served. Addresses were made by the following: John T. Farrell, Providence, R. I., subject, "Roentgenology"; Wm. H. Green, Class 1864, "Advance in Surgery in the U. S. Navy in the Last 50 Years"; T. F. Fitzmaurice, Lewiston, Me., subject, "Status of the Present Day Surgery of the Eye, Ear, Nose and Throat"; Charles A. Riley, Boston (Tufts College Instructor), subject, "Pulmonary Tuberculosis and Its Proper Treatment: Dietetic, Sanatorial, etc."

Short addresses were made by Drs. P. F. Gahm, Medford, Mass.; E. R. Storrs of Hartford, Conn.; Wallace P. MacCallum of Boston, and Gustave Hartman of Lynn, Mass.

The retiring president, Dr. P. F. Gahm of Medford, Mass., moved for the election of officers. The following were chosen:

President for 1916, Dr. Thos. F. Fitzmaurice of Lewiston, Me.; vice-president for 1916, Dr. E. R. Storrs, Hartford, Conn.; treasurer for 1916, Dr. Frank I. Payne, Westerly, R. I.; secretary for 1916, Dr. Wallace P. MacCallum, 214 Huntington Avenue, Boston, Mass.

The next meeting will probably be held at Hartford, Conn.

WORK OF BOSTON MILK AND BABY HYGIENE ASSOCIATION.—A recently published report by Dr. J. Herbert Young, medical director of the Boston Milk and Baby Hygiene Association, states that of 372 babies under the care of that organization during the fortnight ended July 17, only 28, or 7 per cent., failed to show a gain in weight. "During the past thirteen weeks there have been only two deaths of babies registered with the twelve milk stations of the Milk and Baby Hygiene Association, against nine deaths for the corresponding weeks last year, although the number of babies under supervision is twenty per cent. more than the number under care last year. This month 342 new babies came under the care of our doctors and nurses. The number cared for during 1915 to date is 3438."

RECENT CONNECTICUT LEGISLATION.—The recently published seventh bulletin of the Massachusetts State Board of Insanity for July, 1915, calls attention to recent legislation in Connecticut relative to the local care of the feeble-minded.

The Legislature of Connecticut has recently passed a law changing the name of the Connecticut School for Imbeciles to the Connecticut Training School for the Feeble-minded, and has

authorized the construction of buildings for said school on the property of the state in the town of Mansfield.

The act states that the Board of Trustees of the Connecticut Colony for Epileptics shall appoint three of their number and the Connecticut Training School for the Feeble-minded shall appoint three of their number, to constitute a commission to locate a site for the erection of buildings suitable for the conduct of said training school, to be near the Colony for Epileptics at Mansfield.

THE APPOINTMENT OF A BOSTON HEALTH COMMISSIONER.—In the issues of the JOURNAL for May 13, June 10, July 1 and July 29 we have published statements alternately confirming and denying the acceptance by Dr. Richard H. Creel, of the United States Public Health Service, of the appointment as health commissioner of the City of Boston. On July 28 it was finally and definitely announced that Dr. Creel has declined this appointment on account of his health. On July 30 it was announced that the position of Boston Health Commissioner has been offered to Dr. Francis X. Mahoney, the present chairman of the health board, and that he has accepted it.

In the original plan for the reorganization of the board of health there was provision for seven departments. This number has now been reduced to five by the transfer of the local quarantine station to the national government, and of the division of child hygiene to the school department. Dr. William J. Gallivan, chief of this division, has resigned and the determination of his successor has not been made. The appointment of the five new department heads, to be known as deputy commissioners, rests with Dr. Mahoney under the approval of the mayor.

Obituary

CHARLES PARKER HOOKER, M.D.

DR. CHARLES PARKER HOOKER, who died of acute myocardial insufficiency with angina, on July 21, at Fortune Rock, near Biddeford, Me., had been for many years a leading medical practitioner in Springfield, Mass., an intensely active man who shortened his life by unflinching devotion to duty. He was a native of Springfield, born there on September 18, 1855, the son of a physician, Dr. John Hooker, one of the well-known local practitioners of his day.

After obtaining his early education in the public schools of Springfield, Dr. Hooker entered the Harvard Medical School, from which he received the degree of M.D. in 1879. He immediately settled in practice at Springfield, where his success was early and permanent. In 1855 he was appointed county physician and held this

position until March, 1915. An obituary notice of Dr. Hooker, which appeared in a recent issue of the *Springfield Republican*, speaks as follows of his hospital service and associations in that city and of his personal characteristics:

"Dr. Hooker served as a visiting physician of the Springfield Hospital during his practice here and was associated with that institution before it was established in its present location. At the recent dedication of the Dr. Frederick Wilcox Chapin memorial building at the Springfield Hospital he paid appreciative and understanding tribute to Dr. Chapin. He was also a visiting physician on the Mercy Hospital staff for two years after the opening of that institution, but retired to give more time to the Springfield Hospital.

"Dr. Hooker was so vital a personality that his departure will be a shock. He was greatly interested in all that concerned the city of which he was a native, and whose life he entered into with the enthusiasm that was characteristic of all he did. While not conspicuously robust, he was what men call 'wiry'. His interest in his profession led him to overwork, and recognition of the need for rest now and then showed that he was overdoing his strength, but it was not known how near the danger line he had come. His going is a loss to Springfield."

Miscellany.

ADVANCE IN COST OF DRUGS.

In the issue of the JOURNAL for July 29 (Vol. clixiii, p. 183) we published an extended statement detailing the rise in the price of various drugs which has occurred as a result, directly or indirectly, of the European War. Recent report from New York again announces further advance in the cost of several groups of pharmaceutical preparations notably the coal tar products:

"Perhaps the most extraordinary development in the drug and chemical markets today has been the advantage taken of the pressing needs of domestic and foreign consumers of such coal tar products as carbolic acid, cresylic acid, picric acid, benzoate of soda, benzoic acid, salicylic acid and salicylate of soda, antipyrine, acetanilid, acetphenetidin, cresol, hydroquinone, naphthalene, myrbane oil, artificial musk, synthetic wintergreen (or methyl salicylate), artificial almond and mustard oils, comurin, thymol, vanillin and phenolphthalein. All local handlers of the above goods are asking substantial premiums over the prices in effect here a week or ten days ago and are asking much higher prices for the goods when it is known they are intended for export than when known to be for home consumption. Sellers insist that purchasers sign contracts guaranteeing that the goods are being taken

solely for home consumption and are not to leave the country.

Manufacturers of caffeine now find themselves practically unable to supply demand owing to the continued call from export sources which has absorbed the bulk of their offerings. Cost of production is also on the increase, owing to the sharp advance in price of tea and coffee, from which caffeine is extracted. Prices in this market have consequently risen to a basis of \$7.25 @ \$8 per pound for the alkaloid and \$4.25 @ \$4.50 per pound for the citrated. A few manufacturers are attempting to keep their prices down to \$6.50 for the alkaloid and \$3.35 @ \$3.40 per pound for the citrated.

"Quinine salts rule comparatively strong in the local market on the basis of 30 cents per ounce, although outside lots of German and Java salts can be picked up here as low as 29½ cents per ounce. The imports of cinchona bark from Java and Europe were comparatively small in the first eleven months of the current fiscal year, having totalled 3,436,381 pounds, against 3,250,881 pounds in 1914, while the imports of quinine sulphate and all alkaloids or salts from which quinine can be compounded during the eleven months under review totalled 1,826,532 ounces, against 2,578,185 ounces in the corresponding period a year ago and 3,069,206 ounces in 1913. The demand from domestic and foreign consumers is particularly active and bids fair to continue so for some months to come.

The demand for opium from domestic consumers has fallen to negligible proportions, and a further accumulation of spot stock has resulted. Sellers now quote on the basis of \$7 @ \$7.25 for the gum in cases, while holding their powdered and granular grades for \$8.05 @ \$8.10 and \$8.15 @ \$8.20 per pound, respectively. Rumors that the Turkish government has imposed an embargo on the narcotic persist, but still lack confirmation. A feature in connection with the opium situation was the publication of statistics this week showing that the stock of opium in United States bonded warehouses at the end of May this year stood at 104,668 pounds of the value of \$483,320, comparing with only 20,010 pounds of the value of \$73,434 on the corresponding date a year ago. Opium in bond at the port of Boston on June 30 is reported to have amounted to 217 pounds, valued at \$1137, as compared with the same quantity having the same value on the corresponding date a year ago."

CASES OF INFECTIOUS DISEASES reported to the Boston Board of Health for the week ending Aug. 3, 1915, are as follows: Diphtheria, 37, of which 9 were non-residents; scarlatina, 21, of which 3 were non-residents; typhoid fever, 8, of which 1 was non-resident; measles, 43, of which 3 were non-residents; tuberculosis, 42, of which 2 were non-residents. The death-rate of the reported deaths for the week was 14.76.

LARREY AT THE BATTLE OF WATERLOO.

In the issue of the *British Medical Journal* for June 19 appears the following item about the relations of Larrey and Napoleon after the latter's return from Elba, and of Larrey's experience at the battle of Waterloo.

"When Napoleon returned from Elba in 1815 he almost at once sent for Larrey and discussed with him the organization of the ambulances for the forthcoming campaign. But Larrey was made aware that he was to be replaced by Percy as Surgeon-in-Chief of the Grande Armée, and determined to leave the service. Napoleon, however, coaxed him into giving up this intention, and on June 10 he accompanied the Emperor to Belgium. At Ligny it became evident that a mistake had been made in putting Percy in the place of Larrey. Usually before a battle Larrey visited all the places near likely to be suitable for the reception of the wounded, and made all necessary preparations. His experience enabled him to estimate with approximate accuracy the probable number of men who would need attention. Percy, who was exhausted by the fatigues of much campaigning, and who suffered from heart disease besides, was unable to do this. But Larrey himself admits that the best organized ambulance service would have broken down after Waterloo. The surgeons did their best, often under fire and exposed to charges of cavalry. Larrey's chief ambulance was close to the farm of the Belle Alliance, but, as usual, he went about the whole field. While trying to bring off his wounded he received two sabre cuts, one on the head, the other on the shoulder, from a Prussian lancer. He was left for dead on the field, but recovering consciousness tried to make his way to the frontier. When he had reached the banks of the Sambre, and thought himself in safety he was again surrounded by a corps of Prussian cavalry and taken prisoner. They burned the headquarters ambulance at Caillou, where the French wounded had been left. Larrey, who was held in high esteem by the King of Prussia, and who was well known to many German officers, was stripped of his clothes, robbed of his money, his watch, a ring given to him as a talisman by a dying Mameluke after the battle of the Pyramids, a sabre presented to him at Aboukir by Napoleon, and even his boots. His hands were tied, and thus, half-naked, bleeding from wounds torn open by the rough treatment to which he had been subjected, he was taken to the general commanding the advance guard. In stature he was almost the same as the Emperor, and he wore a grey overcoat over his uniform; these things, together with the sabre on which the name of Buonaparte was engraved, made the Prussians believe that Napoleon had fallen into their hands. To the commandant, Larrey, who spoke a little German, explained who he was

and how the name of Buonaparte came to be on the sabre. Hesitating, but not convinced, that officer sent him on to the general commanding the division. That officer knew the Emperor, but, irritated by the mistake, would listen to no explanations, and ordered Larrey to be shot. Fortunately, a military surgeon, who went to blindfold him as he was standing before the firing squad, recognized Larrey and insisted that the execution should be put off. After some difficulty Larrey was brought before Bluecher, whose son he had saved when wounded and a prisoner in 1813. The old soldier apologized, ordered that Larrey's clothes and money should be restored to him, invited him to dinner, and promised to let Madame Larrey know that her husband was safe. He was allowed to go to Louvain, where the municipality and the inhabitants gave him a most flattering welcome. The population of Belgium showed the most practical sympathy with the French wounded. They picked up those who were on the field and conveyed them to the hospitals of Brussels and Louvain. Larrey, as soon as his wounds had healed, asked to have charge of the French wounded in the hospitals of Louvain, and went to Brussels to acquaint himself with the situation of those collected in that town. He found that in many of the hospitals the French wounded were mingled with those of other nations, and that the sight of Prussians lying beside them put them into a state of fury. Every day there were violent scenes in the wards and murderous quarrels took place, a state of things not favorable to cure. Larrey got his fellow countrymen separated from the Prussians and placed together in the military hospital at Brussels. Having operated in a number of difficult cases he went back to Louvain and thence to France, where he arrived on Aug. 15. He found that Bluecher had kept his promise and informed his wife that he was safe."

This chapter of adventures sounds almost too romantic to be true, yet it may probably be paralleled by the experiences of individuals in the present war, when these come to be narrated. Doubtless, many Napoleonic tales have been considerably heightened by the imagination, a custom common among good story-tellers.

Correspondence.

WORK OF THE SERBIAN SANITARY COMMISSION.

We are enabled to give the following extracts from diary letters of Dr. R. P. Strong to his sister. They were written with no idea of publication, recounting simply the progress and details of his work day by day. These extracts are made as of special medical interest. Much of the deepest interest must be left out for reasons not hard to guess.

He arrived in Nish April 22nd, and found the first work to be done was the organization of a general health board which could supervise and unify work throughout the country.

"April 25th. . . . The present board as it stands consists of Prince Alexander, President; Sir Ralph Paget, Vice President, the chiefs of the French, British, Russian and American commissions, the chiefs of the Serbian Military and Civil Medical Department and a representative from the parliament, with Dr. R. P. Strong, Medical Director.

The rest of the session was occupied in outlining a sanitary campaign.

The first meeting of a group of men which includes a number of different nationalities is always a difficult one, but the results have been as satisfactory as I could hope for. Of course, it is not ideal to have such a large board, but when there are so many different commissions you can see it is absolutely necessary for them to have some representation.

In the late afternoon we moved into our house and are really comparatively comfortable. I do not think there is such a thing as a bath tub in any of the houses in Nish. You can imagine what a relief it is to get into a room that you can feel is not infested with insects. . . .

April 26th. . . . This morning began with another session of the Board of Health at 8.30. We concluded the organization of the Board and divided Serbia into fourteen sanitary districts: The English, French and Russian commissions are to have seven of these and America is to have the other seven, the southern half, or new Serbia. The British have been assigned the military districts with the army, and the French the northern ones. The Board of Health will, of course, control the situation in all the districts; but it is obvious to all that it would not be advisable to have English, French and American doctors working in the same Serbian town; that there would be obvious differences of opinion among the subordinates in regard to the work. I expect to travel all through Serbia and make inspections, and if the work is not going on correctly, then it can be corrected through the Central Board of Health.

I received a telegram from Dr. Jackson that he and Dr. Zinsser had arrived at Salonika, and that the remainder of the party was expected tomorrow. I have instructed him to wire me as soon as all the supplies are landed and the rest of the party arrive, and then to proceed to Skopje. At that vicinity there has, according to reports, been an increase recently in the amount of typhus and I shall therefore employ the work of the commission there first. We have no very accurate knowledge of the amount of typhus in Serbia at the present time. There is a record of the number of cases in the hospitals, but none of the amount of the disease among the civil population and this amount must be very large. By the institution of house to house inspection we shall soon be able to find out something in regard to this in the towns. The Russians have charge of Nish but they have only four doctors for house to house inspection.

April 27th. . . . My third important visit today was to His Royal Highness Crown Prince Alexander. . . . As the Prince is leaving tonight he remained in his train, which was standing on the side track near the station. . . . After the usual greetings we talked of the sanitary conditions in Serbia. He asked me what I thought of the cholera serum and I gave him my views on the subject, saying I did not think the cholera serum for the treatment of cholera was of very great benefit, but that cholera vaccine had shown itself to be of sufficiently great value to warrant its general employment in a country like Serbia. He asked if I had had any experience in its use, and I gave him results of the work which I carried out in the Philippines with cholera vaccine. He wanted to know something regarding the statistics, and I told him that in towns where we vaccinated one half the population in order to see the effect of the vaccine, the number of cases in the unvaccinated was six times as great as in the vaccinated sections. This method of vaccination was one I devised in Germany in 1903, you may remember, and I the method

we shall use here in Serbia; that is, we shall use as much of it as I can obtain. It requires only a single inoculation and there is very little local reaction. These are its chief advantages. Its disadvantage is that it is much more difficult to prepare than the old cholera vaccine; but when it is made in a well equipped commercial laboratory this is not the most important factor.

He asked me if I thought that typhus was more dangerous and more difficult to control than cholera, and I told him I thought it was; but that I believed the typhus epidemic could be controlled with proper sanitary measures. . . .

April 28th, Nish. . . . My entire day was spent in an inspection trip. We left here in a motor at 7.40 a. m. I was agreeably surprised at the roads. We were able to run about thirty miles an hour most of the time. In some places the roads were quite bad and we had to go slowly for a few yards. The ride gave me an opportunity to see the country, which is really beautiful and very fertile. There were a great many fruit trees in bloom. Nearly all the land is cultivated; for, as you know, every peasant owns his own land and there are here plenty of sheep and pigs to be seen. Only the women were working in the fields, practically all of the men being in the army. . . . One sees Austrian prisoners in all these towns. They seem to be allowed to wander about a good deal at will, and generally they appear contented and do not wish to return to fight. . . .

April 29th. . . . Skopje. . . . According to the statistics in the military hospitals here there were 749 cases of typhus yesterday but here also we do not know the condition of the civil population. . . . Immediately after lunch I started out to find buildings I could use for disinfecting plants. I visited everything I could see with a smoke stack in the hope I could find some place where steam could be generated for disinfection, but was unsuccessful. . . . In the evening I dined with the Pagets and some of the members of their hospital staff. Lady Paget came in just as we were sitting down, propped up in her chair with pillows, accompanied by her nurse. She looks worn, and as you know, is convalescing from typhus. She has certainly set as heroic an example as a woman could well do in an epidemic of this kind. She was here when conditions were at their worst and went among the dead and picked out cases of typhus still living and had them carried to her hospital. It was in this way she contracted typhus. . . . She has certainly done magnificent work here. There are 450 cases in her hospital now. . . .

May 1st. . . . I went through the entire Paget Hospital and spent some time examining the typhus cases. A feature, of which almost no mention is made in our text books of medicine regarding typhus, is the occurrence of gangrene of the toes and sometimes about the nose and mouth. Another striking feature is the condition of the pharynx, a swollen appearance of the mucous membrane being observed in many instances in the early stages of the disease. In fact, the mouth requires frequent cleansing with disinfectants. This is another fact which seems to suggest that the virus may sometimes be thrown out into the air into the immediate vicinity of the patient. The nurses working in the hospital are carefully protected by their uniforms and they all wear rubber gloves. I understand they have one piece garment made together with the stockings and over these they wear high boots. It is difficult to see how some of them could become infected with these uniforms. Lady Paget wore such a uniform whenever she went near cases, yet she became infected, as did others of the staff of the hospital. . . . There are many Austrian prisoners working about the premises and they have been, I am informed, of the greatest help and assistance. Many of them have had typhus in the hospital itself. I have had the problem staring me in the face since I came here of bathing, disinfecting and sterilizing

ing the clothes of at least three or four thousand people daily, and having their clothes dried for them so they could put them on after their bath. In some of the other towns there have been facilities which could be employed for such a purpose. Thus, in Nish, a brick factory has been employed, the steam being turned into two large iron cylinders in which the clothes were placed. These cylinders were formerly employed for drying the bricks. Here I can find nothing to aid me of this nature. I think I can bring refrigerating cars here and run steam into them as I did at Manchuria. Also, there are no bathing facilities here. . . . Of course, it would be much simpler if we had clean clothing to give the natives after their bath, but we have none and there is no use in disinfecting the individuals unless we disinfect their clothes at the same time.

May 2nd. . . . I understand the motor will arrive tomorrow and I shall certainly need it to visit the surrounding villages. I have had reports today that the epidemic is raging, particularly at Stip and at Pristina just now; that the patients are lying on the floors of various buildings, there being no beds for them and no doctors there. Tonight I must leave for Nish to be at the Board of Health meeting tomorrow. The following day I shall return here and then try to visit Stip immediately. I still have the Montenegro situation staring me in the face. . . . (The diary May 2nd to May 12th has never been received.)

May 12th. En route to Belgrade. . . . At the beginning of the war Serbia had 400,000 men in the army. She now has 200,000, over 100,000 having died from typhus. At the beginning of the war there were 300 doctors in all Serbia and 121 of these have died. This leaves 230 Serbian doctors for the entire population, which amounts, as you know, to about 5,000,000. So you can see that, with much disease in the land and such unsanitary conditions, we need every doctor we can get. . . . Eventually, when the new American contingent arrives, I think we shall have in the neighborhood of 250 foreign doctors. . . . Am dictating on the train. . . . The country we are passing through looks something like that in France. In the southern part of Serbia one sees now whole fields of wild red poppies and other fields of cultivated poppies. These grow taller than the uncultivated and the flowers are either purple or white. The fruit trees are also in bloom in the southern part of Serbia. In the country we are passing through now there are no poppies. One sees just green hillsides.

May 12th continued. Belgrade. . . . Dr. Ryan met me at the station and came on to the hotel with me. One sees in all the principal streets evidences of the destruction caused by the bombardment; huge holes torn in the sides of many of the public buildings and residences. The Austrians fire a few shells over each day and the Serbians reply with a few. We heard a few during the course of the day and I saw one burst in the air. I have been told that one struck and killed two of the horses in one of the carriages that was sent to the station for our party. As Dr. Ryan stayed to lunch with me at the hotel the rumor reached the hospital that we had been in this carriage and had been killed. The people at the hospital were much relieved, of course, to learn that such was not the case. Dr. Ryan has the best hospital building in Serbia. . . . We all have every reason to be proud of the way this hospital is run and of all Dr. Ryan's good work there, particularly admiring his remaining here after having had typhus fever and again taking up his work.

May 14th. Kragujevac. . . . We then went to see Mrs. Stovarts' field hospital. This is in tents and is situated on the outskirts of the town. As it had been raining for three days and most of the tents had no floors, only a thick piece of canvas serving as a floor in some of them, you can imagine the camp was in a very muddy condition. Mrs. Stovarts received us in rubber boots and trousers. She apologized for being without her skirt. All her assistants are women

doctors and nurses. The rest of the day was spent in inspecting Serbian hospitals. One of these had 1000 beds for typhus.

May 29th. Skopje. . . . Yesterday I spent on an inspection trip to Velez and Stip. I went by train from here to Velez, taking the motor on the train with me, and from Velez motoring to Stip in a little over two hours. . . . I have no doctor available to send to Stip at the present time but will send one as soon as new doctors arrive. I reached Velez a little after two in the afternoon and the chauffeur ran the car out on the edge of the town where I had lunch, consisting of a tin of sardines and some crackers. It was the first I had eaten that day because I left too early to get breakfast. . . . Although I have no doctor to send to either Velez or Stip, I am trying to make as many inspection trips as possible before my new men come, in order to know just where to place them. . . . The disinfecting plant made from railway wagons has arrived, and I have found a desirable place to put it. This afternoon we shall bathe the people and disinfect their clothes at the same time. I am going to erect two large tents now, one for them to undress in and the other for them to dress in. . . . A thorough disinfection of hospitals is being carried out in another part of the town, and at the dispensary a large number of women, children and men are being attended. I think I told you that hitherto no provision has been made for the treatment of women and children, as all the doctors have been employed for the army. . . .

May 30th. Nish. . . . In my notes of yesterday I told you I was going to put up a tent for the men to undress in before bathing. . . . It was something of a feat to put up such a large tent, but with the assistance of Mr. Brink, who is very capable in field work, it was done.

The men undressed in the tent as we planned, passed in a line carrying their clothes to the steam sterilizing car and then to the shower baths. From the shower baths they passed to another car where they were sprayed with petroleum and received their sterilized clothes. Of course, it is needless to say that many of them were infested with lice. The clipping of the hair will be a regular proceeding hereafter. Some of the men said that they had not had a bath for over ten months. They seemed glad to be able to bathe, and some of the Austrian prisoners also asked to be allowed to bathe. This, of course, they were allowed to do after the Serbian soldiers had been looked after. . . .

June 4th. Nish. . . . I met yesterday two women whose work I admire very much, one an American, Miss Simmons, from the Roosevelt Hospital in New York, and the other Miss Sandes, an English nurse. These women have been doing perfectly splendid work here in Serbia at Valuejo. Both of them had typhus there, but insisted in going on with their work afterwards. . . .

The following extracts were from a letter of Dr. Strong's to Miss Mabel Boardman of the Red Cross. It will be published in the "Red Cross Magazine" and should be read in full. The letter describes Dr. Strong's visit to several towns in Montenegro. Miss Boardman has kindly authorized this brief extract.

"My party consisted of Mr. Brink, Sanitary Inspector, a Serbian gendarme and my interpreter. We rode into Pech at 5.00 a. m., having been in the saddle or on foot for fourteen hours. My gendarme made a sorry appearance as we rode in to the village. It had rained all night and we were drenched. By half past six we had found and gotten up the doctor, and I went immediately to inspect the hospital. Here I found conditions in a dreadful and very alarming state. On entering the hospital I saw in the first room through which we had to pass, many piles of clothing which had been removed from the typhus cases. These lay on the floor and crawling over these and upon the floor in the vicinity were literally thousands of lice. I had never seen so many before—even in Serbia.

The hospital had about 250 cases of typhus. They were all badly neglected. The wards themselves were in a dreadful condition. There were no disinfectants and no means of bathing the patients, and no clean clothes or bedding for them. The condition of the latrines was beyond description. Unless strenuous measures are immediately taken here typhus will probably rapidly spread and another general epidemic result as happened in Serbia. I have arranged to disinfect the hospitals here, the patients and their clothes.

We shall place the troops that are now in barracks in tents while we are disinfecting their former quarters, clothes and bedding. I have also supplied clean clothing and night shirts for all the patients in the hospital and have quarantined Pech."

RICHARD P. STRONG.

BOSTON PARK SHOWS.

Boston, July 28, 1915.

Mr. Editor: A new educational method has been introduced with success this summer in Boston. The problem of how to reach a large number of the population who seldom read, if they read at all, has been met with considerable success by what may be called "teaching for fun."

A committee was formed composed of representatives of the Anti-Tuberculosis Society, the Boston Y. M. C. A. and Y. M. C. U., the Women's Municipal League, the Massachusetts Child Labor Committee, the Milk and Baby Hygiene Association, the Massachusetts Society for the Prevention of Cruelty to Animals, and the Foster Campaign Committee of the Associated Charities. These societies, united by their common interest in civic betterment and public health, co-operated in organizing and supporting the following plan: each society subscribed \$25 and guaranteed another \$25, if necessary, to meet the expenses. An active executive committee was formed, and a program of moving picture shows, with phonographic music, was laid out. The show was to be given five evenings in each week for a period of six weeks or more in the pleasure parks in different parts of the city.

A program committee obtained interesting pictures and selected moving picture films which were hired, and the program was varied each night. The committee secured the co-operation of some of the city departments, such as the Park Commission, and from private firms obtained the use of a phonograph and records, as well as an automobile truck to transport the whole show. It was necessary to hire an operator and a manager who obtained the necessary permissions and who saw that everything was ready and in place and all immediate arrangements made. The program was carefully arranged to give entertainment, and every third or fourth film or picture was educational.

It was estimated that during the first ten nights 60,000 people saw these shows, which began at 8.15 P.M. and lasted about two hours. Most of the people remained to see the entire performance and showed great enthusiasm at certain pictures, such as the weighing of a baby at a milk station.

The possibilities of public education appear to be very great through this form of entertainment. Since ignorance of hygiene and public health matters is one of the greatest difficulties which the physician meets today, we commend this form of education to the attention of the medical profession.

Very truly yours,

A. B. EMMONS, 2d, M.D.

BELGIAN PHYSICIANS' RELIEF FUND.

REPORT OF THE TREASURER OF THE COMMITTEE OF AMERICAN PHYSICIANS FOR THE AID OF THE BELGIAN PROFESSION FOR THE WEEK ENDING JULY 31, 1915.

CONTRIBUTIONS.

Washington County (Ark.) Medical Society,	
Fayetteville, Ark.....	\$14.00
Dr. J. F. Pressley, San Francisco, Cal.....	5.00

Receipts for the week ending July 31.....\$ 19.00
Previously reported receipts.....7750.84

Total receipts.....\$7769.84
Previously reported disbursements:
1625 standard boxes of food @ \$2.30.....\$3575.00
1274 standard boxes of food @ \$2.30.....2930.20
353 standard boxes of food @ \$2.28..... 804.84

Total disbursements.....\$7310.04

Balance\$ 459.80

F. F. SIMPSON, M.D., Treasurer,
7048 Jenkins Arcade Bldg., Pittsburg, Pa.

SOCIETY NOTICE.

NEW YORK AND NEW ENGLAND ASSOCIATION RAILWAY SURGEONS.—The twenty-fifth annual session of the New York and New England Association Railway Surgeons, celebrating the quarter century anniversary of the organization of the association, will be held at Hotel Astor, New York City, October 21, 1915, under the presidency of Dr. W. H. Marcy, of Buffalo, N. Y.

A very interesting and attractive program has been arranged. Railway surgeons, attorneys and officials, and all members of the medical profession are cordially invited to attend.

GEORGE CHAFFEE, M.D., Corresponding Secretary,
338 47th Street, Brooklyn, N. Y.

APPOINTMENTS.

BOSTON STATE HOSPITAL.—Dr. E. H. Cohoon has been appointed by the Boston State Hospital Trustees as administrator of the Psychopathic Hospital. For the past eight years he has been connected with the Rhode Island State Hospital.

COLUMBIA UNIVERSITY.—Dr. Frederick Tilney, of Brooklyn, has been appointed professor of neurology at the New York College of Physicians and Surgeons, in succession to Dr. M. Allen Starr, who recently resigned.

MCGILL UNIVERSITY.—The following recent appointments are announced in the medical faculty. Assistant professor of chemistry, Dr. F. W. Skirrow; assistant professor of physiology, Dr. J. A. Gray; associate professor in pathology, Dr. Horst Oertel; assistant lecturer in physiology, Dr. T. P. Shaw; lecturers in immunology, Drs. J. C. Meakins and Fraser B. Gurd; lecturer in hygiene, Dr. R. St. J. Macdonald; lecturer in biology, Dr. F. S. Jackson, and associate professor of physics, Dr. L. V. King.

RECENT DEATHS.

DR. HENRY K. EWING, who died on July 30 at East Bridgewater, Mass., was born at Bentonport, Iowa, in 1829. For several years he had been in practice at East Bridgewater and was resident physician at the Millet Sanatorium. He is survived by his widow and by one daughter.

DR. DAVID STRETT, who died on July 30 at Baltimore, was born in Hartford County, Md., in 1854. After obtaining his preliminary education at Bethel Academy he received the degree of M.D. from the Baltimore College of Physicians and Surgeons. For the past thirty-five years he had been dean of the latter institution and professor of the principles and practice of medicine at the University of Maryland Medical School. He was formerly a trustee of the Baltimore Medical College and of the Maryland General Hospital and president of the Baltimore Medical and Surgical Society.